

solid and semi-solid particles floating in the air, and that Mr. Lister has devised a method by which these particles can either be kept out of a wound made by the surgeon, or by which they will have their power of producing the putrefactive change destroyed, is, I think, beyond doubt.

"The fact that the various changes in organic matter which we know as fermentations, putrefactions, etc., are due to minute organisms, which organisms are not spontaneously developed, but arise from similar organisms only, is one of great importance in hospital management."

Improved Adhesive Plaster.—With a view to overcome the disadvantages of the common adhesive plaster Dr. MARTIN, of Roxbury, has devised (*Boston Med. and Surgical Journal*, March 8, 1877) an improved plaster composed of India rubber and Burgundy pitch in about equal proportions, a very small amount of some other gum-resins and less essential substances, introduced chiefly for convenience of manipulation. The adhesive compound is spread upon a strong drilling cloth, and presents the following important advantages; it contains no solvent whatever, and hence can be used with impunity upon the most sensitive skin. When brought into apposition with the skin, it adheres at once and at all temperatures, without the application of heat, and instead of losing its hold after a while, it clings with increased tenacity, not becoming detached or loosened, even when the parts around it are bathed with cold or tepid water. This peculiar adhesiveness and the strength of the cloth upon which it is spread constitute its chief advantages. Experiments are being made with a view to applying the adhesive compound to water-proof cloth, applicable to certain surgical exigencies; and if these attempts are successful, the last desideratum will have been met.

Honours to American Physicians.—At the meeting of the Obstetrical Society of London, held on the 7th of February, Dr. E. R. Peaslee, of New York, was elected

Honorary Fellow, and Drs. William Goodell, of Philadelphia, and Horatio R. Storer, of Boston, were elected Corresponding Fellows.

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Medical Graduates in 1876.—

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Medical College of Indiana . . .	22

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OBITUARY RECORD.—In New York, March 6th, GURDON BUCK, M.D., aged seventy years

Dr. Buck is perhaps best known to the profession by his advocacy of the weight and pulley treatment of fractures of the thigh, and by his contributions to plastic surgery.

— at Boston, on the 19th of February, aged 56 years, CHARLES E. BUCKINGHAM, M.D., Professor of Obstetrics and Medical Jurisprudence in Harvard University.

—
FOREIGN INTELLIGENCE.

Relief of Pain by the Outward Application of Hydrate of Chloral.—Dr. W. B. KESTIVEN (*Lancet*, Feb. 10, 1877) calls attention to the benefit to be derived in the relief of pain by the external application of hydrate of chloral, for the knowledge of which he is indebted to his friend Dr. T. S. Dowse, of the Central London Sick Asylum, Highgate. The vast field that is afforded by these metropolitan institutions for the cultivation of practical medicine is not neglected by Dr. Dowse, but is turned by him to good account. The results of the trial of hydrate of chloral as an external application have lately been given. Dr. Kesteven adds his experience of this mode of using this drug, in order that it may become more widely known.

He has tried it with great success in neuralgic pains and in cancer of the breast, in cases in which other sedatives and narcotics have failed to give relief.

The mode of application is by the saturation of folds of lint of the size of the part to which it is to be used, brought into close contact, then covered with three or four layers of lint covered with oil-silk or spongio-piline wrung out of hot water. The application to raw surfaces, of course, requires some care in manipulation.

The strength of the solution is about four drachms to sixteen ounces of water. The addition of a small quantity of glycerine is advantageous. Chloride of zinc or perchloride of iron can be combined with the chloral in certain cases.

Salicylic Acid.—M. A. ROBIN asserts, in a communication to the Biological Society of Paris, that, in typhoid fever, salicylic acid almost constantly diminishes the quantity of urine excreted, and the quantity of indican increases under its use; moreover, it produces ulceration of the back of the throat, and even consecutive œdematous inflammation of the larynx. He recommends very dilute solutions in typhoid fever, for fear of arresting the flow of urine. He had observed a buzzing in the ears as the result of the use of salicylic acid. M. Leven is opposed to the use of this substance in typhoid fever. Powerless in small doses, it causes serious troubles in the digestive system, which are especially dangerous in that disease. M. Lepine finds, also, that the acid is very slightly excreted in typhoid, and that it produces a buzzing in the ears, but less intensely and less constantly than with quinine. Valuable in some cases of acute rheumatism, it renders no service in typhoid fever.—*British Med. Journal*, Feb. 10, 1877.

Cantharidian Cystitis.—Under this title Dr. Vézien gives (*Rev. Médicale*, Feb. 12) an account in the *Journal de Pharmacie d'Alger* of an affection of the genito-urinary organs, which he says the military surgeons are familiar with among the soldiers in Algeria. It has been commonly termed by them urethritis, but it

is really a cantharidian cystitis, easily recognizable by its symptoms. Its origin is a curious one, it being produced by eating the flesh of frogs, which in the months of May and June feed almost exclusively upon vesicant insects belonging to the tribe of cantharides. The irritating properties of these coleoptera are found in the flesh of the frog, which in a certain number of instances produces this affection in those who partake of this food.—*Med. Times and Gaz.*, March 3, 1877.

Serofulous Ulcers: Red-Lead and Cinabar Plaster.—In his wards at the hospital of Saint-Louis, M. VIDAL has for several years made use of a plaster which he considers very efficacious in cleansing the greater number of ulcers and serofulous sores. Its composition is as follows: Diachylon plaster, 26 parts; red-lead, 2.50 parts; cinabar, 1.50 parts.

These ingredients are thoroughly mixed and spread upon a piece of calico like an ordinary diachylon plaster; small pieces of the plaster are used a little larger than is sufficient to cover the ulcer. It is a very appropriate mode of treatment, and may be easily employed for a long time. M. Vidal recommends it strongly.—*London Med. Record*, Feb. 15, 1877.

Ovariectomy at the Samaritan Hospital.—The year 1876 has been the most successful on record at the Free Samaritan Hospital—the operation of ovariectomy having been performed fifty-five times with only five deaths. Forty of these were performed by Mr. Spencer Wells, with four deaths; seven by Mr. Bantock, with one death; and eight by Mr. Knowsley Thornton, without a death. The fifty-five cases include many in which both ovaries were found diseased and removed; and many of the operations were most formidable from the nature and extent of the adhesions. No case in which the diagnosis of ovarian tumour was made was refused the operation, however bad the prognosis, provided the patient still wished to have the last chance when the extra danger of her case had been fully explained to her. We believe these are the best results yet published, either in hospital or private

practice; and if there are any members of the profession who still have doubts as to the advisability of ovariectomy, we commend these cases to their consideration.—*Med. Times and Gaz.*, Feb. 17, 1877.

The Protective Results of Revaccination.—The following facts should be considered sufficient to establish the importance of revaccination in the minds of those few who may still have any lurking doubts on the subject. Dr. GAYTON, Medical Superintendent of the Smallpox Hospital at Homerton, reports under date January 30 last: "During the present epidemic, fifty-six fresh servants have been engaged here; of these, twenty-seven had previously suffered from smallpox, and twenty-eight were revaccinated on taking office. One who was, unfortunately, not reported to me, and who had neither been vaccinated since infancy nor previously had smallpox, speedily contracted it. With this exception, our staff has enjoyed perfect immunity." Dr. COLLIE, Medical Superintendent of the Fever Hospital at Homerton (now devoted to smallpox patients), says, in his report dated January 31 last: "About twenty-five persons in the service of this Asylum have been revaccinated during the present epidemic. None of these have contracted smallpox." This recent testimony confirms the report which was presented by a committee to the Metropolitan District Asylum Board in 1872, in which it was stated that "the necessity of revaccination, when the protective power of the primary vaccination has to a great extent passed away, cannot be too strongly urged. No greater argument to prove the efficacy of this precaution can be adduced than the fact that of upwards of 14,800 cases received into the hospitals, only four well-authenticated cases were treated in which revaccination had been properly performed, and these were light attacks. Further, conclusive evidence is afforded by the fact that all the nurses and servants of the hospitals, at one time to the number of upwards of 300, who were hourly brought into contact with the disease, who constantly breathed its atmosphere, and than whom none could be

more exposed to its contagion, have, with but few exceptions, enjoyed complete immunity from its attacks. These exceptions were cases of nurses or servants whose revaccination, in the pressure of the epidemic, was overlooked, and who speedily took the disease; and one case was that of a nurse who, having had smallpox previously, was not revaccinated, and took the disease a second time." Revaccination is to the general public what the safety-lamp is to the miner; it affords a protection which only exceptional circumstances render inefficient.—*Med. Times and Gaz.*, Feb. 10, 1877.

A Smoker's Disease.—M. MAURIAC, Surgeon of the Hôpital du Midi, has just added another to the special diseases of smokers. He has described, under the title of *plaque des fumeurs*, a morbid change of the mucous membrane of the tongue and mouth, a special psoriasis. This lesion may degenerate into epithelioma; and, according to M. Mauriac, cancer of the lips and tongue has often no other origin than this. Both are common among men, and very rare, as might be supposed, among women.—*London Med. Record*, Feb. 15, 1877.

On the Use of the Ophthalmoscope in Nervous Diseases.—For fourteen years it appears that M. BOUCHUT has reviewed in the month of December his ophthalmoscopic work at the Children's Hospital, Paris. In a clinical lecture reported in the *Gazette des Hôpitaux*, January 4, he gives the first part of his review for 1876. The record of cases is exceedingly valuable, but we venture to doubt whether these or any other cases will justify the extraordinary pretensions which M. Bouchut makes for ophthalmoscopy in a diagnostic point of view. We do not wish to dispute M. Bouchut's claim to having at least largely helped to diffuse the knowledge and employment of this mode of research, but what can be thought of the following paragraph? "To-day the cranial cavity is no longer closed to observation as it was in the olden time, before the first works which I published in

1862." "That which occurs in the meninges, in the brain, and in the spinal cord, can be recognized in the fundus of the eye by alterations visible with the ophthalmoscope."

"We can, from a physical phenomenon observed in the eye, draw conclusions as to a cerebro-spinal alteration, just as from a cardiac or pulmonary murmur we can deduce this or that lesion of the heart or the lungs."

To begin with, the cranial cavity was not absolutely closed to observation before the year 1862. M. Bouchut has devoted himself to children's diseases. Let us take one of the most insidious of the nervous diseases of children—viz., tubercular meningitis. A Scotch physician (Dr. Robert Whytt) had come to a very shrewd diagnosis, and written a clinical account of this disease, which has never been surpassed, more than ninety years before M. Bouchut began his ophthalmic expositions. But has M. Bouchut so completely opened up the cranial cavity to observation? Let us consider the significance of one, and that the most important, of the ophthalmoscopic appearances observed in diseases of the cerebro-spinal system—viz., optic neuritis. Surely Dr. Hughlings-Jackson's dictum ("double optic neuritis generally means 'coarse' disease within the skull") embraces all that we are justified in concluding when we find this condition in any given case. Nobody has insisted more strongly than Dr. Jackson that optic neuritis does not help us more than this. We neither learn from it the nature of the change, nor the locality of the change; and the mechanism of the connection between optic neuritis and coarse cerebral disease is still inexplicable. There are, indeed, most important limitations to the dictum itself. Firstly, the neuritis may be idiopathic, or, at all events, unassociated with any cerebral disease to be discovered post-mortem. In a case of Mr. Brudenell Carter's there were typical choked disks, but post-mortem examination disclosed the existence of kidney disease, and no brain disease at all. Secondly, when optic neuritis and cerebral disease are associated, the latter is not always coarse—tubercular meningitis, for instance.

Thirdly, there may be "coarse" cerebral disease without optic neuritis (*vide* Dr. Hughlings-Jackson, *Ophthalmic Hospital Reports*, May, 1876). Similar remarks might be made on other ophthalmoscopic phenomena. For example, we recently saw post-mortem a well-marked case of tubercle of the choroid in a patient who, though manifesting abundant miliary tubercle in the abdomen and thorax, had none in the brain or its membranes. But if we are greatly in the dark about their interpretation in cerebral diseases, how little do ophthalmoscopic changes teach us respecting the nature of spinal-cord disease! Suppose M. Bouchut finds atrophy of the optic nerve in a case of locomotor ataxy, how much does that positively teach him as to the extent and position of the lesion? To dogmatize on the results of a method of research which is still in its infancy appears to us only calculated to discredit it altogether. But to whatever perfection ophthalmoscopy may be brought, neither the ophthalmoscope nor any other instrument will free us from the necessity of considering any given case in its clinical entirety—the symptoms and the history as well as the signs.—*Medical Times and Gaz.*, Feb. 17, 1877.

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One-sided Deafness in relation to Military Service.—At a recent meeting of the Medical Society of the Vienna Garrison (*Feldarzt*, December 12), Prof. POLITZER was invited to give his opinion as to whether one-sided deafness should act as a disqualification for active military service, which it does in the German army. In reply, he observed first, that persons who were partially or totally deaf on one side, very frequently heard just as well, especially at long distances, as those whose ears were in quite a normal state. But this one-sided deafness is connected with an anomaly in hearing which is of the highest importance—that is, it is accompanied by an impossibility of judging of the direction of sound. Even in the normal condition of the organ of hearing, the power of judging of this is possessed only in an imperfect degree; for the distinguishing the direction of the sound is no

act of the sensation itself, but is the result of our judgment, based on preceding experience. The source of sound will be referred to the right or left accordingly as the sound strikes the one or other ear more forcibly; but our judgment as to its direction becomes entirely uncertain if both ears are in the same position as regards the source of sound—when we are frequently unable to decide whether the sound comes from before or behind. Prof. Politzer having observed that so many persons suffering from diseases of the ear not only were not able to indicate the direction of the source of sound, but frequently referred it to quite the opposite of the reality, instituted some experiments. He found that if a loud-ticking watch be held over the vertex of a person with closed eyes, and moved over the head from before backwards, he will not be able to state with certainty whether the watch is in front, above, or behind. Whenever he closes one ear, the sound of the ticking is immediately transferred to the side of the open ear. Although our judgment concerning the direction of the source of sound is greatly assisted by the sense of sight, yet, even with this aid, the decision on the point will be surprisingly altered if one ear be closed. When this is done, the ticking of the watch placed over the vertex, even if its position be seen, will be projected in the direction of the unclosed ear. From these and other experiments, Prof. Politzer concludes that our judgment concerning the direction of sound can only be determined by binauricular hearing, and even with this we are not always able to be certain. Similar results followed trials with speaking. Most surprising were the errors made in well-marked one-sided deafness. Even with the greatest attention the subjects of this were often unable to detect the direction of the sound until they saw the object producing it, or had acquired the knowledge by frequent change of position of the head. This was very remarkable in the hunting-field, when the sounds were often supposed to come from the opposite direction, if the deaf ear was turned towards the spot whence the sound came.

From the foregoing it results that the

exemption of persons with one-sided deafness from active military service is amply justified. It is evident that the placing such persons as outposts on a dark night might give rise to dangerous consequences.—*Med. Times and Gaz.*, Feb. 10, 1877.

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Action of Metals in Anæsthesia.—At the meeting of the Biological Society, January 13, Prof. Charcot gave an account of some experiments now carrying on at the Salpêtrière, with the aid of M. Burq. It is well known, he observed, that in hysterical patients one side of the body is often struck with anæsthesia, which is not transitory, but permanent. Now, if in a certain number of such cases a twenty-franc gold coin or two be placed on some part of the anæsthetized side, it will induce in fifteen or twenty minutes a return of sensibility throughout a zone extending from five to ten centimetres above and below the points on which such coins have been placed; and this sensibility will persist throughout a whole day. In other hysterical subjects gold produces no such effect, and copper requires to be employed, while in others it is zinc; but it is gold which most frequently so operates. One day, M. Charcot, wishing to show those who accompanied him how evident the hemi-anæsthesia was in a hysterical patient, traversed the length of her arm with a long needle. The patient uttered a terrible cry, and it was then ascertained that M. Burq had applied the metal to her arm the same morning. Not only does the sensibility return, but there is an elevation of temperature, and the dynamometer indicates an increase of force. The return of sensibility does not take place suddenly, the patient feeling first by cross-purposes, *e. g.*, ice will feel like a hot body. It is well known that hysterical anæsthesia disappears under the influence of faradization, and it may be asked whether these metallic applications give rise to a simple electrical phenomenon. This is a question which will be decided by an investigation by physical and physiological experts which is now being made. However this may be, the fact itself has been proved in the plainest manner. Without adopting M. Burq's views on what he calls metallo-

therapeutics, Prof. Charcot acknowledges that his point of departure is perfectly exact. He added, that the metals act not only on the anæsthesia of the hysterical, but furnish absolutely the same results when this is due to organic causes, *i.e.*, dependent on cerebral lesion.—*Med. Times and Gaz.*, Jan. 27, 1877.

Cases of Retarded Putrefaction and Prolonged Rigor Mortis.—M. TARCHINI BONFANTI records two remarkable cases of retarded putrefaction and prolonged rigor mortis that fell under his observation in Milan. Two women were found with their heads battered in, and who had died with profuse hemorrhage. Rigor mortis was fully developed, and little or no putrefaction, and he and several other surgeons and physicians at first believed that not more than thirty-six hours could have elapsed since death had taken place. On consideration, however, it occurred to him that the temperature had been persistently low (50° to 54° Fahr.), the atmosphere dry, the air in the rooms had been but little changed in consequence of the windows and doors being closed, and the amount of light admitted was small. The bodies were lying on a Dutch-tiled floor, were extremely exsanguine, contained very little food in the digestive tract, and the death had evidently been sudden. The mistress was old and tolerably well-nourished, the servant thin and young. From these circumstances, all of which were favourable to the prolongation of the state of rigor mortis and the prevention of putrefaction, M. Tarchini Bonfanti arrived at the conclusion that a longer period than thirty-six hours had probably elapsed, and they might have remained in the condition in which they were found for seventy-two hours, or three days, or even longer. On the trial of the assassin it proved that death in the above cases had taken place four days and a half prior to the discovery of the bodies. The cases are important from a medico-legal point of view, as showing the caution that should be exercised in pronouncing upon the date of death from the presence of rigor mortis and the absence of putrefaction.—*Lancet*, Feb. 10, 1874.

Influence of Coloured Lights on Maniacs.—Dr. TAGUET, Physician to the Asylum of Ville-Evrard, has experimentally investigated the sensational statements of Dr. Ponzus as to the influence of coloured light in subduing the violence of mania. In a room whose windows were of blue glass, and whose walls were painted the same colour, a patient labouring under strong maniacal excitement was placed for three hours. The light seemed to fatigue him as he kept his eyelids closed during most of the time, but no calming tendency was apparent. For several days the experiment was continued, but with negative results. The second case was one of acute mania with refusal to take food, etc.; there was no improvement. A number of others were tried, including some hysterical patients, but in all cases the light seemed to weary rather than soothe them. The Director-General of the Asylum at Moscow has given a full trial to the new treatment, but without the slightest result.—*Dublin Journal of Med. Sci.*, Jan. 1877, from *Annales Médico-Psychologiques*.

Deaths from Chloroform.—Mr. J. H. WILSON, of Peterborough, records (*Lancet*, Feb. 10, 1877) a case of this after the inhalation of two drachms of the anæsthetic, by a man aged 52 years, suffering from strangulated inguinal hernia.

The *British Medical Journal* for January 20 reports a case which occurred the preceding week at University College Hospital. The anæsthetic was taken for removal of a piece of carious bone from the stump of an arm. The patient had taken ether safely at a previous operation.

The same journal for the succeeding week contains the reports of two more cases. One occurred at the Wolverhampton and Staffordshire General Hospital, the chloroform having been inhaled prior to the amputation of a fractured fore-finger; the other case was that of a lady who was to undergo an operation for removal of a tumour from the throat.

A New Poison.—At the meeting of the Academy of Sciences of the 7th inst., a new poison was presented by M. Vulpian

for MM. Ernest Hardy and Gallois. It is named inea, and is a heart-poison already studied in France by MM. Pollaillon and Carville, and in England by Dr. Fraser. Like digitaline, but in a stronger degree, it kills frogs and other animals, the heart being in systole. The discoverers scarcely know as yet how to class it, but they are convinced that it is not an alkaloid.—*British Med. Journ.*, Feb. 24, 1877.

A Catalogue of Works on Naval and Military Medicine.—Dr. FRIEDRICH FRAENKEL, of Glogau, a German army surgeon, is issuing a systematic catalogue of every work which deals with the relations of medicine to the requirements of soldiers and seamen, in the hope that it may be of service to those who are engaged in literary work connected with these subjects. It appears under the title of "Bibliotheca Medicinæ Militaris et Navalis: contributions to the literature of military and naval medicine," and is published by Gutmann, of Berlin. It is appearing in parts, in which the works are arranged (*a*) alphabetically according to the authors' names, and (*b*) according to the subjects. Dr. Fraenkel desires the co-operation of all writers on military hygiene, etc., librarians, societies, and others, in completing the catalogue; and any works which may be forwarded to him will be returned within a short period.—*Med. Times and Gaz.*, Jan. 6, 1877.

German Surgical Chairs.—Prof. CZERNY, of Freiburg, has been called to Heidelberg to occupy the Professorship of Surgery vacant by the death of Professor Gustav Simon; and Professor Maas, of Breslau, succeeds him at Freiburg.—*Med. Times and Gaz.*, Jan. 27, 1877.

Personal.—Sir James Paget, Bart., has been gazetted Sergeant-Surgeon in Ordinary to the Queen, vice Sir William Fergusson deceased. Mr. Prescott Hewett, President of the Royal College of Surgeons, has been appointed Sergeant-Surgeon Extraordinary, succeeding Sir James Paget in that honourable office; and Mr. John Eric Erichsen, Surgeon to University College Hospital, in recognition of his long and distinguished career as a prac-

tical and scientific surgeon, has been appointed one of her Majesty's Surgeons Extraordinary. It is rumored that Mr. Prescott Hewett will shortly be made a baronet.

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OBITUARY RECORD.—At Berlin on the 24th of January, aged 80 years, Dr. Johann Christian Poggendorff, Prof. of Physics at the University of Berlin. Dr. Poggendorff is best known to the profession as the editor of the *Annalen der Physik und Chemie*, which position he filled for fifty-two years and until his death.

— at London, on the 11th of February, aged 69, Sir WILLIAM FERGUSON, Bart., Sergeant-Surgeon to H. M. the Queen, and Senior Surgeon to King's College Hospital.

Sir William was a Scotchman by birth, and studied medicine at Edinburgh. In 1840 he removed to London to accept the Chair of Surgery in King's College. He was specially distinguished for his advocacy of conservative surgery. He was a skilful, brilliant, and imperturbable operator, and his professional judgment was held in the highest esteem. As an instance of his coolness the following anecdote is told: Once, when operating for the removal of a deep-seated tumour of the neck, a fearful gush of blood announced the severance of a large artery. An assistant promptly thrust his finger into the wound to arrest the flow, when Fergusson coolly said, "Jist get your finger out of the way, mon, and lets see what it is," and quietly securing the vessel, completed the operation.

His contributions to literature were few, the chiefest of them being his *Practical Surgery*, published in 1842, and his *Progress of Anatomy and Surgery in the 19th Century*, published in 1867. He will always be remembered for those changes and improvements in surgery which he introduced, and which include his operations for hare-lip and cleft-palate, excision of joints (especially of the hip and knee), and removal of the upper jaw with the labio-nasal incision. Sir William was created a baronet in 1866, and in 1867 he was appointed Sergeant-Surgeon to the Queen. In 1870 he was elected President of the Royal College of Surgeons.

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This portly volume is a marvel of condensation. In a style at once clear, interesting, and concise, Dr. Bristowe passes in review every conceivable subject connected with the practice of medicine. Those practitioners who purchase few books will find this a most opportune publication, because so many topics not usually embraced in a work on practice are adequately handled. The book is a thoroughly good one, and its usefulness to American readers has been increased by the judicious notes of the Editor.—*Cincinnati Clinic*, Jan. 6, 1877.

But any one who wants a good, clear, condensed work upon Practice, quite up with the most recent views in pathology, will find this a most valuable work. The additions made by Dr. Hutchinson are appropriate and useful, and so well done that we wish there were more of them.—*Am. Practitioner*, Feb. 1877.

It is impossible to look over its pages without being impressed with the amount of information which they have been made to contain, with no appearance of conciseness at the expense of completeness. A superficial survey even shows that, as a text-book, it is far in advance of those published only a few years ago; and a more careful examination of some of its sections—such, for example, as the one devoted to diseases of the nervous system—

demonstrates that in provinces which have accomplished the greatest advances of late years, the author has kept his work quite abreast with the labors of the most reliable clinical observers. Features quite unusual in a purely medical treatise are included in the shape of excellent chapters on diseases of the skin, the affections of the genito-urinary organs in females, which can but result in lessening the tendency on the part of the general practitioner to neglect the important classes of complaints with the feeling that, like derangements of the chief organs of the special senses, they can better be managed by specialists.—*New Remedies*, Nov. 1876.

We recommend highly this book, and feel justified in doing so by the thought that, of its class it is the best we have yet seen. The judicious remarks of the American editor add very much to the value of the work. His jealous guard over American medicine is most praiseworthy: in fact, our only complaint is that so little of his own well-known style appears.—*Obstet. Journ. of Great Britain and Ireland, Am. Suppl.*, Nov. 1876.

While he has done what he really intended to do, viz., presented every subject with all possible conciseness and brevity, there is nothing to warrant the conclusion that such a result is due to any want of that thorough preparation and knowledge requisite in a work of greater amplitude and pretension. Indeed, the experienced and candid reader will testify that there are no real evidences of the fact that this work is adapted only to the wants of junior practitioners and students; on the contrary, while the style is concise, it is polished, and conveys, as a rule, what would be demanded by the most experienced practitioners; while the number and variety of subjects discussed is really astonishing. It is a most excellent volume, and will be fully prized by all who possess a copy of it. The American editor has really improved the volume by his additions to it, and deserves warm commendation for his faithful and efficient labors. We have no general works on the practice of medicine that, in many respects, are so fully up to the results of modern researches.—*Journ. of Mental and Nervous Diseases*, Jan. 1877.

HENRY C. LEA, Philadelphia.

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GOSSELIN'S CLINICAL LECTURES ON SURGERY . . . 16 PAGES.

CLINICS.

CLINICAL LECTURES.

Clinical Lecture on Strangulated Hernia. Delivered at the London Hospital. By C. F. MAUNDER, F.R.C.S., Surgeon to the Hospital.

GENTLEMEN: By a curious coincidence a case of strangulated hernia has come under my care on the last day of each of my last three in-taking weeks. Each case has some special points of interest.

Case 1.—This was an instance of strangulated inguinal hernia of the left side, reduced *en masse* by the patient himself. I operated upon him successfully; and for the second time, with an interval of ten years.

Case 2. *Femoral hernia; operation; recovery.* (Reported by Mr. Herman Tribe.)—H. MacC—, aged fifty-eight, a blacksmith, was admitted on June 20th, 1876. Ten months ago he observed a swelling in his left groin, which sometimes disappeared. On June 17th the swelling became very hard and painful, and vomiting, which has persisted, set in. On examination to-day (June 20th) a hard, globular tumour was found at the seat of femoral hernia. There was slight impulse on coughing(?). The finger could easily be passed into the inguinal canal. The patient still vomited, appeared to be very weak, and his countenance looked haggard. An operation was considered advisable, and the man at once consented.

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wound which I made in the serous membrane, with a view to enlarge the constricting neck just enough to admit of reduction. I allowed nothing—not even the point of a director, much less my finger—to enter the sac, so as to avoid every risk of peritonitis.

The after-treatment of the wound requires some consideration. I generally close it with the hope of getting primary union, and now and then this has resulted both in hospital and in private practice. But the surgeon must be on his guard, the parts being concealed by compress and bandage, lest decomposing fluids become pent up and give rise to both local and constitutional disturbance. Should one or both arise, as occurred in these cases, the treatment is evident. Some years ago a man of seventy, from Chigwell, had been submitted to herniotomy. He progressed very favourably for several days, when, finding him drowsy and somewhat light-headed, with loss of appetite, I examined the seat of the wound, which, though healed, fluctuated. I opened it up, and gave exit to some stinking pus. A charcoal poultice was applied. On the next day all unfavourable symptoms had vanished, and the patient recovered.

Of these three patients two suffered a good deal from diarrhœa. It is reasonable to suppose that a portion of intestine injured by compression and inflammatory action would take time to recover its health. To give it rest that it may do so, we generally administer one or more doses of opium to arrest peristalsis, and administer liquid nourishment for a few days. Possibly a subacute enteritis, spreading from the damaged portion of bowel, may account for this relaxed condition. This might be prevented by a method of treatment which commends itself to my judgment, recently suggested by Mr. De Berdt Hovell. It consists in supporting the patient by nutrient enemata for a few days subsequent to operation. Certainly, by this method the small intestines would be left quiescent, and possible perforation be averted.

Your patient must not get up until provided with a suitable truss. No patient who is ruptured should be without his

truss, except when he is recumbent. The danger of going without it is illustrated by Case 3. For ten years the man had not been without it, and the hernia had never given him any trouble. He omits to wear it, and becomes the subject of strangulation and herniotomy.—*Lancet*, Jan. 13, 1877.

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Cases of Paralysis of the Musculo-Spiral Nerve. By WM. R. GOWERS, M.D., Assist. Phys. to University Hospital, London.

Paralysis of the musculo spiral nerve is of not very rare occurrence, but it is of interest from the illustration it affords of the consequences of certain forms of nerve-injury. The following cases treated at the National Hospital for the Paralyzed and Epileptic illustrate some points of practical importance in the symptomatology of the affection:—

Case 1. Paralysis of Musculo-Spiral Nerve from Pressure; Electrical Contractility of Muscles unchanged; Rapid Recovery.

—A porter, aged forty-two, presented himself on January 5 with complete paralysis of the extensors of the wrist and long extensors of the fingers, of one month's duration. He had gone to sleep when lying on a bench on his right side, and woke up unable to extend the hand. Three years before, when at sea, he had had a similar attack from a similar cause, but the paralysis on that occasion lasted only three days. When first seen no improvement had occurred. No extension of the wrist or metacarpo-phalangeal joints was possible. If the proximal phalanges, however, were passively extended, the two distal joints could be readily extended by the interossei, which were unaffected. He complained of tingling in that part of the hand which is supplied by the radial division of the musculo-spiral, but no loss of sensibility could be detected. Electrical examination showed that although there was complete paralysis, there was no loss of contractility to the faradic current in any muscle except in the extensor ossis metacarpi pollicis, which did not act quite so readily as on the other side. There was no increase in contractility to the voltaic current. He was ordered faradisation of the affected

muscles, and the voltaic current along the course of the nerve every other day. In a week he had recovered considerable power of extension, and the slight defect in the irritability of the extensor of the thumb could no longer be detected; and in another week he was so rapidly improving that he ceased to attend.

Case 2. Paralysis of the Musculo-Spiral Nerve from Pressure; Change in Electrical Contractility of Muscles; Slow Recovery.—

A man, aged fifty-three, in the beginning of September, 1876, went to sleep with his arm over a sharp piece of wood, with the elbow bent. On waking he found the whole arm numb and tingling, and that he could not extend the wrist or fingers. He came to the hospital a month later, and it was then found that there was complete loss of power in all the muscles supplied by the musculo-spiral nerve, and in no others. There was marked flattening of the back of the forearm. Electrical investigation showed that, compared with the left arm, there was considerable diminution of contractility to faradism in the radial extensor of the wrist, and a slighter but distinct diminution in the ulnar extensor of the wrist and common extensor of the fingers. There was no loss of irritability in the supinator longus, but considerable diminution in the force of its contraction; a current of moderate strength caused a much stronger contraction in the supinator longus on the healthy than on the affected side. There was no loss of contractility in the lower part of the triceps, the hand muscles, or the muscles on the flexor aspect of the forearm. The muscles in which the faradic contractility was lessened presented a distinct increase in their irritability to the voltaic current. Faradisation of the affected muscles was ordered, and in a fortnight, although there was no return of voluntary power, the faradic contractility had so far returned that scarcely any difference could be detected between the muscles of the two arms, and the increased irritability to the voltaic current had disappeared. The same treatment was continued, and the improvement in contractility was soon followed by a return of voluntary power, which increased

so that by the beginning of January the wrist and fingers could be extended as completely as on the other side. Both the extensors and supinators were weak, however, so that if he raised a weight from the table with the hand midway between pronation and supination, there was a tendency to increased pronation. The weakness of the extensors was shown also indirectly by the defective strength of grasp, which in the right hand was only twelve kilogrammes, while in the left it was thirty-five. The treatment was continued, however, and in another two months the arm was affirmed by the patient (and appeared) to be perfectly well.

Remarks.—The musculo-spiral nerve is of all nerves of the arm that most frequently paralyzed. This is the result of its exposed course as it winds round the humerus beneath the triceps muscle. This position exposes it to two dangers: to the effects of pressure, and to the damage in violent contractions of the triceps. The first of these is the more common, and is illustrated by the cases detailed. The position of the nerve protects it to some extent from sudden violence, but exposes it to damage from long-continued pressure, as in certain postures not unfrequently assumed during sleep. Occasionally, although rarely, paralysis results from pressure during sleep in bed. The patient goes to sleep on the right side with the arm under him, and wakes in the morning with the extensors of the wrist paralyzed. The more common cause is an afternoon nap on a chair or a bench, with the arm hanging over some hard or sharp edge. It is curious that one patient should have had two attacks produced in this way. This may have been due to some habitual position of the arm during sleep, or to the musculo-spiral nerve having a course more than usually exposed. The other way in which the nerve sometimes gets injured is by a violent muscular contraction. Dr. Gowers has seen two cases in which this occurred. One patient was an epileptic liable to attacks of *petit mal*. He felt an attack coming on, and to save himself from falling, seized a rain-water pipe

close to which he was standing. On recovering consciousness he found himself still grasping the pipe, and had some difficulty in relaxing his hold, in consequence of complete loss of power over the extensors of the hand. There was at first general weakness of the limb, but it soon became limited to the muscles supplied by the musculo-spiral nerve. These rapidly wasted and presented the loss of faradic and increase of voltaic contractility. In another case the same accident happened during a violent extension of the arm in throwing a stone. There was instantly violent pain in the arm, and complete paralysis of the extensors of the wrist and fingers. A few days afterwards extravasations of blood were apparent along the edge of the biceps and also at the back over the triceps muscle. It is probable that laceration of some of the muscular fibres caused an extensive hemorrhage. In this case, a month after the injury, the faradic contractility was lost in all the muscles of the forearm supplied by the musculo-spiral nerve, and also in the lower part of the triceps muscle. The weakness of the flexors, which is conspicuous in all cases of extensor paralysis, and which was very marked in those above described, is, of course apparent only. The flexors of the fingers, acting on both wrist and digits, can only act on the latter with force if the wrist is kept extended. Flexion of the wrist shortens so much the course of the flexor tendons that only very slight flexion of the fingers is possible. This is easily shown in the healthy. If the wrist-joint be forcibly flexed, the two distal joints of the fingers can be flexed only very slightly, and at the expense of much pain in the flexor muscles in the forearm. The constant carpal flexion on use of the hand in these cases of extensor paralysis often causes a slight backward protrusion of the carpal bones, which is the source of much uneasiness to the patient.

These cases illustrate the prognostic as well as the diagnostic value of the electrical examination of paralyzed muscles. The change in faradic contractility is an index to the state of nutrition of the nerve-fibres both within and without the

muscle. The profound diminution in the faradic contractility indicates, as is well known, a degenerated state of the nerve-fibres, the result of an irritating lesion of the nerve at the seat of injury. To this the electrical contractility is the only sure guide. Visible loss of nutrition in the muscles is a less certain indication, since the flabbiness of atony may be mistaken for the shrinking of atrophy. Loss of muscular power is no guide as to the state of the nerves and muscles, as these cases show. Each came under observation a month after the injury. In each when first seen the loss of power was complete; but the first, in which there was no evidence of nerve-degeneration, was well in a few weeks; the second, in which there was marked depression of faradic contractility, was well only in a few months; while in the case of the epileptic, in whose muscles the depression of faradic contractility was profound, nine months passed before there was any return of power, although he also ultimately made a good recovery. Another point in regard to the contractility of paralyzed muscles was illustrated by Case 2. The supinator longus presented no loss of irritability; slight contraction occurred to a current of the same strength as was needed for the healthy muscle, but a stronger current caused far less contraction in the paralyzed than in the unaffected muscle. In testing a muscle the most significant thing to note is the contractility—the weakest current to which it will react; but it is also important to note the power of the muscle—the degree of contraction to a stronger current—since the latter may, in rare cases, be altered as a consequence of nerve-injury, etc., while the former remains normal. It is impossible to doubt the usefulness of electrical applications in such cases. No doubt the slighter cases would recover without its aid, but it is frequently to be noted that the first return of power occurs soon after the commencement of electrical treatment. The excitation of the nerve seems to aid the recovery of a state in which the voluntary stimulus can traverse the fibres. For this purpose, in the case of the musculo-spiral

nerve, the voltaic current is most effective on account of the deep course of the nerve beneath the fibres of the triceps muscle, and the voltaic current has much greater power of penetrating a layer of muscular fibre than the faradic. The latter is, as it were, absorbed by the contracting muscular fibres to a far greater extent than the voltaic current. In more severe cases, as in that of the epileptic mentioned, in which all nerve-irritability for a time is lost, the application of the voltaic current to the muscles is often followed by an improvement in their nutrition. In that patient this was very marked, and voluntary power was ultimately regained, although it had been absent for many months, during which the muscles distinctly improved in size under the treatment.—*Med. Times and Gaz.*, May 5, 1877.

HOSPITAL NOTES AND GLEANINGS.

A Case of Placenta Prævia; Narrow Escape from Asphyxia under Chloroform; Intra-uterine Respiration of the Fœtus.—The fact of the establishment of intra-uterine respiration in the subjoined case, which came under Dr. Galabin's care at the Guy's Hospital Lying-in Charity, has an important medico-legal as well as a clinical bearing. Post-mortem examination showed that the left lung had been sufficiently expanded by air to float in water, although the fœtus had probably died at least three hours before delivery.

For the following notes we are indebted to Mr. J. BRETT, M.R.C.S., resident obstetric assistant.

On the afternoon of Feb. 12, 1877, a woman twenty-five years of age, between the seventh and eighth months of her fourth pregnancy, sent for assistance. Two weeks before she had had a fall on the left side, and the day previous she had received a blow upon the abdomen. All the morning she had been exerting herself in lifting weights, when suddenly, at 1.30 P. M., she felt a sudden gush from the vagina. At least two pints of blood were lost at this time, and the bleeding continued in lesser quantity. None had occurred previously during her preg-

nancy. The woman fainted from loss of blood, and was lifted into bed. When first seen she had a pulse of 130, extremely weak. No labour-pains had commenced; the os was sufficiently dilated to admit one finger; and the edge of the placenta was felt partially occupying the cervical canal. Dr. Galabin was sent for, but was not at home. The membranes were then ruptured, ergot administered, and a watch kept upon the patient. Her condition appeared so hazardous that all preparations were made for transfusion, in the expectation that this operation might become necessary before delivery could be effected.

Dr. Galabin visited the patient at 7 P. M. She had then somewhat revived, but was extremely blanched, and no uterine contractions whatever had occurred. The cervix was very rigid, and at least three inches long; the internal os was dilated enough to admit two fingers, and the external os was somewhat wider. The vertex was presenting, but was very high up, being displaced by the placenta. The placenta was still attached posteriorly up to the margin of the internal os. It was separated by the finger from the lower segment of the uterus for about two inches, according to the method recommended by Dr. Barnes, but, the uterus being perfectly flaccid, the hemorrhage was not diminished by this means, but rather increased, and the vagina repeatedly became filled with clots. It was then proposed to introduce a hydrostatic dilator into the cervix, but the patient, who was extremely restless and unmanageable, refused to allow any such manipulation without the use of chloroform. In order, therefore, to avoid more than a single administration—since an anæsthetic appeared hazardous in the patient's anæmic state—it was resolved to perform version if possible. The pulse becoming almost imperceptible before the patient was fully under chloroform, the anæsthetic was changed to ether. She then made a slight effort at vomiting, and was quickly observed to be choking. The jaws were tightly clenched, and could not be forced open till she was apparently dead. The larynx was then cleared by

the finger from some vomited matter which obstructed it, and artificial respiration was performed for some minutes, after which natural breathing was restored.

Bipolar version was then performed by Dr. Galabin, the patient being in the dorsal position, and the right hand used internally. The head was already so high that its upper margin was at the level of the umbilicus, and could not be pushed much further by the internal fingers passed through the elongated cervix; it was therefore carried up to the right iliac region by the external hand acting alone, and the left knee was afterwards pushed down within reach of the finger in the cervix. Bleeding was arrested from this time, but the cervix remained too rigid to allow delivery to be completed, although ergot was again administered, and traction made upon the leg. The fœtus was then observed to make convulsive movements, and with each movement a gasping sound was heard from the uterus; this was audible at the other extremity of the small room, and upon auscultation had a startling loudness. It was evident that during version air had found its way to the fundus of the uterus, and that the fœtus, becoming asphyxiated from detachment of the placenta, was trying to breathe. The gasping was continued at intervals for about a quarter of an hour. It was impossible to effect extraction quickly, and no attempt was made to supply the fœtus with air through a tube for fear it should obtain entry into the uterine veins. If a double-action canula had been at hand, it might have been a safe measure to withdraw air by suction through it from the uterus, thus allowing fresh air to supply its place, and keep the fœtus alive until the cervix yielded. About three hours afterwards some uterine contraction commenced, four full doses of ergot having been given. The cervix gradually dilated, strong traction being made upon both legs, and the fœtus was extracted about four hours after the performance of version; it gave no sign of life. An autopsy was made, and it was evident that air had entered the lungs, the greater part of the left lung

being sufficiently expanded to float in water. The fact of the intra-uterine respiration of air was thus confirmed. The mother suffered from severe febrile symptoms from the second to the fourth day, the temperature rising to 105°, and the pulse to 140; but eventually she made a good recovery.—*Lancet*, April 21, 1877.

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Removal of Naso-pharyngeal Polypus.—M. VERNEUIL, of La Pitié Hospital, lately removed from a boy, aged eight years, a large naso-pharyngeal polypus. The operation was attended with considerable hemorrhage; and, in consequence, symptoms of acute anæmia set in; and in the evening of the day of the operation, about four hours afterwards, the boy was so low—the temperature of the body having fallen to 33½ deg. Cent. (92.3 Fahr.)—that the *interne* on duty summoned M. Verneuil to see the patient. M. Verneuil not being at home, it was determined to keep the patient up by administering stimulants, such as brandy and water, pure claret, etc., which had the effect of producing a slight rise of the temperature. At 8 P. M., M. Verneuil, finding the patient still extremely low, at once injected hypodermically ten drops of sulphuric ether, and in about half an hour afterwards repeated the injection. From this time forward, the temperature gradually rose, and about forty hours after the operation was found to be a little above the normal standard. This case elicited some instructive remarks in a clinical lecture from M. Verneuil. In referring to syncope in connection with great operations he said that this state may occur before, during, or after an operation. In the first case, it may be brought on by simple fright, as in the celebrated case of lithotomy related by Desault, in which whilst he was describing the operation to his audience, and delineating on the patient the different steps of the operation, the latter suddenly died on the operating-table before any incision was made. Syncope during and after an operation may arise from nervous shock or from profuse hemorrhage. It sometimes happens that instead of taking place during or immedi-

made; others intimate that in a certain number of cases the only indication is to correct the angular and rotary displacements, and that nothing is to be done about overriding because it does not exist. This is perhaps true for some children, but it is not exact for adults. In them fracture of the shaft of the femur is always accompanied by overriding or, what amounts to the same thing, shortening or longitudinal displacement, and if in some cases it has not been recognized, it is because the surgeon has not measured the limb and has been deceived by the inclination of the pelvis which makes both legs seem of the same length. Not only is there shortening in fractures of the shaft of the femur in adults, but it cannot be corrected by ordinary simple reduction, such as is made with the hands, according to the indications of the authors, and during the first days which follow the accident.

Can it be afterwards corrected by other means? We shall examine that question in a moment.

But I wished first to formulate, from what has occurred in our three patients and from what I have seen in many others, these propositions: 1st, that the immediate correction of the shortening by the hands alone, and without the aid of anæsthesia, is impossible in most cases, and it is through prudence that I do not say in all cases, of fracture of the thigh in adults; 2d, that if this correction can be obtained early, it is by anæsthesia. It may be obtained tardily and slowly by the prolonged use of continuous extension combined with that of retention, but unfortunately this method encounters difficulties of execution which make us fear we shall not reach the desired end.

I now resume the history of our three patients, and I say that in all three I made the ordinary reduction without obtaining a satisfactory result so far as the shortening was concerned. But there is one of them, No. 5, the youngest of the three, and the one who seemed to me to be the least affected with alcoholism, upon whom you saw me use chloroform the next day and renew the attempt at reduction. A Scultet apparatus, arranged like the one for the leg, but extending from the groin to the foot, had been previously placed below the broken limb, and while an assistant held the foot firmly and was ready to make extension, and another pressed upon the pelvis for counter-extension, the patient was brought under the influence of chloroform with the ordinary precautions, and especially the ordinary intermittences. We had some difficulty to obtain resolution, and it was preceded by a period of great agitation, during which the patient moved the broken limb as freely as the other one, caused the upper fragment to project under the skin, and increased by the violent contraction of his muscles all the displacements with which you are acquainted. Standing on the outer side I had to hold the fracture very firmly with both hands to oppose this powerful muscular action, and you saw, nevertheless, that at certain moments my opposition was overcome, and I was obliged to ask another assistant to help me hold the fragments. Finally quiet was obtained, the muscles became soft, and I made the reduction. I measured the limb rather rapidly,

and it seemed to me that there remained barely an eighth of an inch of shortening; I then applied the Scultet apparatus.

In the other two cases I did not have recourse to anæsthesia to make the reduction, and for these reason: one of them, No. 11, is a teamster more than 56 years old, and greatly given to drink; now you know that in such patients muscular resolution is difficult and slow to obtain. It is necessary to give a great deal of chloroform and consequently expose the subjects to the dangers of this agent, dangers which exist especially during the days which follow great traumatic lesions. It is also necessary to pass through a much longer and more intense period of excitation, during which perforation of the skin by the fragments is not impossible. This accident happened to one of my patients in the Hôpital Cochin in 1858. Two of us held the fragments as firmly as possible, but the patient struggled so violently several times that the limb slipped through our hands and a point of the upper fragment pierced the skin. This perforation healed by first intention, thanks to the occlusive dressing immediately applied. But it is none the less true that this possible complication and even the danger of increasing the tearing of the muscles and periosteum during these struggles, necessitates a certain reserve in the use of anæsthesia in cases of this kind, and are even a contra-indication in patients who are rather old and alcoholic.

The other patient, the one with the sub-trochanteric fracture (No. 46), has so much shortening that I could not hope to obtain a permanent diminution of it by means of anæsthesia. The little that I might have obtained would certainly not have lasted, and therefore it was useless to expose the patient to the risks of chloroform.

Let us now examine the second question, that of reduction. How shall these fractures be confined and immobilized, and what precautions shall we have to take during this retention?

For two of the patients, Nos. 5 and 11, the problem is already in great part solved. I have applied the Scultet apparatus, to one of them after having made reduction during anæsthetic sleep, to the other without this preliminary precaution. I took care—after having wrapped the leg in the compresses and bands which form the inside of this apparatus, and after having applied a very long external cushion of chaff which reached from above the crest of the ilium to below the edge of the foot, after having also applied internal and anterior cushions, then the three splints corresponding to these cushions, and after having closed the femoral and tibial portions of the apparatus with the buckled straps—I took care, I say to complete the dressing with a body bandage applied about the pelvis and sewed fast to the outer envelope of the Scultet apparatus, and then placed the patients on the mechanical bed.¹ I shall not use the water-bed unless sores appear on the sacrum and make me fear an eschar.

I have also told the patients not to sit up in bed, to eat while lying down, and to move as little as possible. I shall prescribe in a few days one or two drachms of the phosphate of lime daily.

I shall renew the apparatus every third or fourth day during the

¹ See page 83.

first fortnight, and each time that I do so I shall make fresh attempts to overcome the shortening. I do not hope to diminish it very much by these repeated reductions, but I shall at least be able to oppose the increase which tends to take place during the first two or three weeks.

After the twentieth day I shall renew the apparatus only every eighth or tenth day; I shall only have to tighten the outer straps when I find them relaxed.

On the sixtieth day I shall see if any mobility remains, by making with precaution the manœuvres which you saw me employ the first day to detect this sign. If I no longer find mobility I shall leave the limb uncovered and tell the patient to make a few movements of his toes, foot, and knee. I shall myself communicate some from time to time to combat rigidity of the articulations, especially of the knee. If I still find mobility, I shall reapply the apparatus and leave it, renewing it from time to time, until consolidation is obtained.

At what period will I allow the patients to get out of bed and walk with crutches? I shall wait at least until the eightieth day, and probably until the ninetieth. For one of the things which I fear, and which should be most feared after fracture of the thigh, is the breaking of the callus by a fall, even a very simple one, while walking or standing. I have seen these iterative fractures on the seventieth and seventy-fifth days, in patients who had left their bed too soon, in opposition to my advice, and then it required three months more to get consolidation.

In general, I let the patients get up only after I have demonstrated by several trials the absence of abnormal mobility and the patient's ability to raise the heel five or six inches from the bed without bending the knee.

You will perhaps ask why I have given the preference to the Scultet bandage, with the limb extended; why I did not choose, as has been recommended, and as you have seen me do, the same apparatus with the limb bent upon a double inclined plane; why I do not speak of an immovable bandage, and why I do not use continuous extension for all three of our patients, as I am going to do for the last one of them.

These are my answers:—

1st. As for the Scultet apparatus with the limb in semi-flexion, I recognize in it one advantage, which is that this position of the knee seems to cause a less rebellious arthritis and less consecutive rigidity.

Nevertheless the fact is not yet established by sufficiently numerous observations, to serve as a basis of treatment; and, on the other side, I have often seen this position of semi-flexion cause intolerable pain in the calf of the leg, so that the inclined plane had to be removed and the limb placed in extension. Indeed, in two of my patients, this compression of the calf of the leg was followed by obliteration of the popliteal vein and painful œdema of the leg.

I know that this obnoxious compression can be avoided by using, instead of the wooden inclined plane, one made with bags of chaff, as Dupuytren and Sanson did. But I saw that these bags yielded readily, and that to replace them and re-establish the semi-flexion the limb

had to be moved three or four times every day, which is a disadvantage. And as finally consecutive rigidity is not completely prevented by semi-flexion, and as that which follows extension disappears, I do not see any real utility in adopting semi-flexion as an absolute rule.

2d. I do not intend to employ an immovable apparatus, because it would no more prevent shortening than will the one which we have chosen, and because it would perhaps permit the reproduction of angular displacement. For sixty to eighty days of immobility are necessary. If the limb was enveloped in a plaster, silicated, or dextrinated bandage, the application would be made by the fifteenth or twentieth day; for, if applied later, it would be of no use. It would have to remain in place for from forty to fifty days. Now during this time the limb would diminish in size, a gap would result, and the fragments, being less well supported, might undergo longitudinal displacement. I much prefer the movable bandage, which I tighten when relaxed, and which I renew entirely from time to time. I thus support the fracture much better, and avoid more surely very vicious consolidations.

3d. Why not an apparatus to make continuous extension? Theoretically, this mode of treatment is reduction, for if we cannot, with our hands and in a single attempt, overcome the resistance of the muscles which produce the shortening, it is logical to hope that this resistance can be conquered by a long-continued mechanical traction. That is the thought which guided Brunninghausen, Desault, Boyer, Baumers, F. Martin, and all the surgeons who, before and since their time, have invented apparatuses for continuous extension for the treatment of fractures of the femur.

Notice this well, gentlemen:—

The idea of continuous extension is very rational; many apparatuses inspired by this idea have been invented. None of them thus far have been able to take definitive rank in practice. From time to time a new one is invented because the inconveniences and insufficiency of the others are recognized.

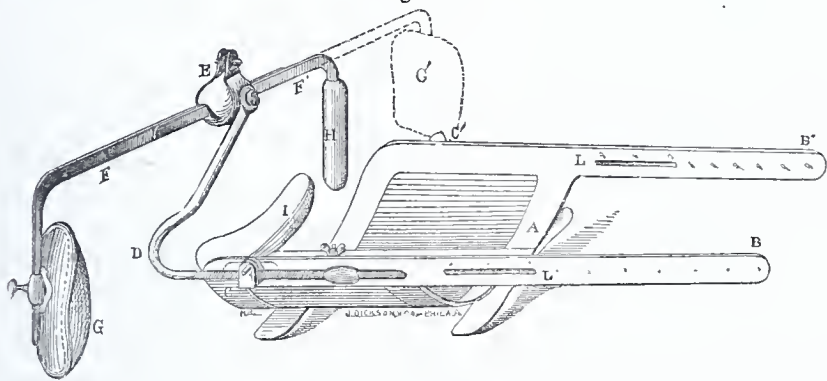
Whence comes this difficulty of making the practice accord with the theory? It comes from this, that to overcome the very energetic muscular resistance against which they have to contend, these apparatuses for continuous extension have, on the one hand, to permanently exert strong tractions which are in themselves painful, and, on the other hand, to apply the extension and counter-extension at certain parts of the limb where the pressure causes pain, and sometimes eschars. That which has prevented, then, the use of these apparatuses from becoming general is found first in these two results: pain and eschars.

There is also a third reason; in many cases, after having subjected the patients to these inconveniences, the shortening has persisted. Those who have not given close attention, and who have not measured, may have been deceived by a lowering of the pelvis which hid the real shortness; but those who measured have almost always found a shortening of from one to one and a half inches, and have been obliged to recognize that by these sufferings, supported for several weeks, they have barely gained from one-quarter to three-quarters of an inch.

There is also a fourth reason. When the patients are young, the shortening, if not more than one and a half inches, does not make them limp permanently. Why then expose them to the pains of continuous extension? When they are old the shortening will certainly make them limp, but they will also be much less able to bear extension; they will have eschars more easily, and, in consequence, incur greater danger. Is it not better, then, to be satisfied with simple retention, which will leave a little more shortening, but will give more tranquility to the patient and surgeon?

Such are the reasons, gentlemen, which have prevented, and will long prevent, the use of apparatuses for continuous extension from becoming general in practice.

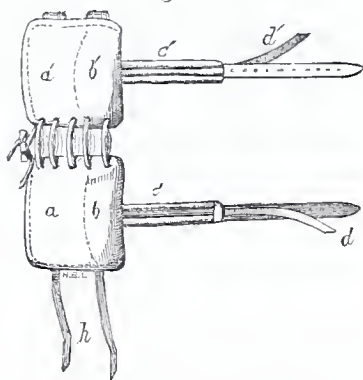
Fig. 17.



Hennequin's Apparatus. D, bent rod which can be placed on either side of the trough A; E, clasp, through which slide two rods, one of which bears the iliac pad G, the other, the pubic pad H; I, ischiatic pad in the form of a crescent.

But these reasons are not sufficient to cause us to reject them absolutely. I understand why they should try continuous extension in cases where the shortening is very great; but it should be done only on the condition of watching the apparatus attentively, so as to avoid eschars and to diminish as much as possible the pain caused by the tractions. These are the ideas which have guided me in the treatment of our last patient. I might have used Baumer's method, in which counter-extension is made upon the pelvis at the genito-crural fold, or that which is known as the American splint, in which the axilla on the side corresponding to the fracture is used for this purpose; but I preferred the apparatus now more generally used in the Paris hospitals (Fig. 17), which was invented by Dr. Hennequin.¹

Fig. 18.



Hennequin's Apparatus. *a a'*, band to surround the leg, thickly padded at *b b'*, which corresponds to the condyles of the femur; *c c'*, elastic bands ending in straps perforated with holes; *d d'*, ribbons graduated to show in pounds the amount of traction.

¹ Hennequin, *Quelques Considerations sur l'Extension continue et les Douleurs dans la Coxalgie* (Archives G n rales de M decine, Dec. 1868,   Fevrier, 1869).

I shall not give you a minute description; it is sufficient to show it to you, and to recall in a few words its principal points and advantages. It consists of a trough in which the thigh rests, allowing the knee to be flexed, the leg being outside the bed and the foot upon a chair.

Counter-extension is made by means of pressure exerted—1st, upon the ischium by a curved pad (I, Fig. 17), attached to the upper part of the trough; 2d, upon the outer iliac fossa by another pad, G; 3d, upon the horizontal ramus of the pubis by another pad, H. The two latter are attached to the rest of the apparatus by two rods sliding through a hinged clasp, E. Counter-extension is made by means of the bracelet represented in Figure 18, which surrounds the thigh, and from which extend two elastic bands, *c d*, *c' d'*, a sort of artificial muscle, which are attached to buttons on the two long lateral parts of the main apparatus.

I shall apply this apparatus about the twelfth or fifteenth day, after the inflammatory period is ended. If things go on as in three other patients upon whom I have had occasion to employ this mode of treatment, you will see that I shall have to change the situation of the pads several times, so as to render them endurable; that the patient will be tormented by the pains caused by extension; that it will be necessary, from to time, to diminish the traction exerted by the elastic bands; and finally, that the foot and lower part of the leg will become œdematous, notwithstanding the roller bandage which will previously have been placed about them. If the patient is not too sensitive, and if he bears the pain bravely, we shall perhaps succeed in curing him without shortening, or with a shortening of about an inch. But if the pain is intolerable, and if, to diminish it, we are obliged too often to loosen the elastic bands, the result will be less fortunate, and there will remain a shortening of two inches or more. Everything here depends upon the degree of sensibility and energy of the patient; and it is precisely because we find only few who are able to bear the pain caused by this and by every other apparatus for continuous extension, that it cannot be adopted in all cases. Above all, do not try it upon children, women, or old people; for to the pain you might easily add eschars, which would increase the suffering and might be dangerous.

LECTURE XXI.

FRACTURES OF THE NECK OF THE FEMUR.

Two fractures of the neck of the femur in old women—Difficulty of determining upon what point the fall occurred—Functional and physical symptoms—Impossibility and uselessness of the diagnosis between intra- and extra-capsular fractures—Astley Cooper's error as to the influence of age—Obscurity of the authors upon the differential signs—Be satisfied with presumptions upon the seat of the fracture as upon the penetration—Simple treatment in all cases—Indication to avoid pain—Rejection of apparatuses for continuous extension.

GENTLEMEN: We have at this moment in ward Ste. Catherine two old women, one of whom was brought to us the day before yesterday, the other a week ago. Both of them fell while walking, without great violence.

The first (No. 6), 69 years old, slipped in her room, and, after several efforts to keep her balance, fell upon the right side.

The second (No. 20), 71 years old, made a misstep in the street and fell upon her left side.

I asked them particularly what part of their body received the force of the fall; they answered that it was the side, and indicated with the hand, the one more especially the hip, the other the hip and buttocks. But both showed a certain hesitation in it, and said they did not know very well, but that they thought they fell in such or such a way.

However that may be, neither was able to get up and walk, and they were brought here upon stretchers.

On examining them we find in both the following symptoms:—

1st. *Functional Symptoms*.—Both suffer when they try to move in bed. If the hips are raised for the purpose of passing a bed-pan, they cry out; when not moved they suffer little. The one who has been here for a week suffered during the first two nights, but scarcely at all now. The one who was admitted the day before yesterday suffers a great deal, and had a bad night on account of the pain.

I told them to raise the foot from the bed; neither one was able to do so. No. 6 took her thigh in both hands and raised it, but at the same time she bent her knee, and her foot slid along the bed without being raised above it. No. 20, who suffers more, was able to make no movement.

Both of them have an imperfectly circumscribed swelling of the upper part of the thigh; the one who was admitted most recently has an extensive ecchymosis in the trochanteric region.

2d. *Physical Symptoms*.—I called your attention first to the attitude of the patients. They were lying upon the back, and a little on the painful side, and begged earnestly not to have the position changed. The injured limb was rotated outwards, so that the outer edge of the

foot rested upon the bed, and the heel corresponded to the space between the internal malleolus and the heel of the other foot.

The better to appreciate this attitude, I persuaded the two patients to allow themselves to be placed flat upon their backs, and then I showed you that the rotation of the limb outwards persisted, and that there was also a notable lowering of the pelvis. For, stretching a string from one spine of the ilium to the other, I showed you that its direction was oblique with reference to the median line of the body, the end on the injured side being half an inch lower than a line crossing at right angles from the other spine.

Finally, there is in both a shortening which can be seen and measured; it can be seen, because the heel of the injured side is clearly higher than the other; and by measuring the distance between the spine of the ilium and the malleoli on each side, I find a difference of about three-quarters of an inch in No. 6, and one inch in No. 20. I say about; for whatever care you may take, it is difficult to place the measure so accurately upon the different points as to be sure that you do not make a mistake of a line or two. But the important fact is to determine the existence of shortening; now, it certainly exists here, and the measurement shows it to be a little greater than it seems. You understand why; the pelvis is inclined, as it is in almost all painful diseases of the hip and of the upper part of the thigh, and this inclination hides part of the shortening.

I did not look for either mobility or crepitation; for, gentlemen, with the signs which I have just pointed out, doubt is not possible. These two women have fracture of the neck of the femur.

A simple contusion might indeed cause the trouble in the movements and the pain which we find here, but it would not cause rotation outwards and shortening. We could be mistaken only if the contusion happened to a patient who, for a long time previously, had had dry arthritis or *morbus coxae senilis*, which had caused rotation outwards and shortening. It was to guard against this error that you heard me ask if they had limped or suffered in the hip for several years, and it was because they answered negatively that I do not have to believe this is a fresh contusion superadded to an old dry arthritis.

Nor have you reason to think of a traumatic dislocation. For, in addition to the fact that dislocation is rare in old people, and that it is produced by a fall from a high place rather than by causes so slight as those which have intervened here, we do not find the symptoms of the most frequent, the iliac, dislocation, since in it the rotation is inwards, not outwards. Supra-pubic dislocation is the only one which is accompanied by rotation outwards and shortening, and it is easily recognized by the prominence formed by the head of the femur as it lies upon the pubes.

We have decided now the most important point of the diagnosis. These patients have fracture of the neck of the femur.

But there is another point which, if I turn to the descriptions of our best authors, ought also to have a certain clinical importance. Is the fracture *extra capsular*, *intra capsular*, or *mixed*, that is, both intra- and extra-capsular?

If you read the works of Astley Cooper and Malgaigne you will find different chapters for extra- and intra-capsular; if you read those of Vidal de Cassis and Nélaton you will not find, it is true, a separate description of the two varieties, but they insist so strongly upon the differences and the diagnosis that one ought to conclude in the utility and possibility of a differential diagnosis.

I see, with pleasure, that M. S. Duplay¹ has not followed the same road, and passes over in silence the diagnosis of intra- and extra-capsular fractures. I like to think that this is due to my clinical lessons at La Pitié, in which he heard me develop the idea that a rigorous diagnosis between extra- and intra-capsular fractures is both impossible and useless. Impossible, because the differential signs given by the authors are inexact or cannot be detected upon the living subject. Would you like the proof? Examine any one of the differential points given by A. Cooper and Malgaigne.

Astley Cooper insisted upon one means of diagnosis, which, if it was true, would be very convenient. He said: Almost all fractures of the neck of the femur, after 50 years, are intra-capsular, and before 50 years, extra-capsular; and he adds in proof of this assertion, that of 225 persons over 50 years of age, in whom he found fracture of the neck of the femur, in only two was it extra-capsular; in the 223 others the fracture was intra-capsular. Our two patients, being more than 60 years old, should therefore have intra-capsular fracture.

Astley Cooper here fell into a great mistake, from which he drew, fortunately, an excellent therapeutical conclusion. I explain this error by these two circumstances, that he scarcely found in his autopsies anything except intra-capsular fractures, and that he found them in old people. For, in his time, they did not very well understand fractures with penetration, they did not know that in order to detect them upon the cadaver it is necessary to split the neck of the femur vertically; those who examined the pieces without taking this precaution, failed to recognize extra-capsular fractures. Astley Cooper then reasoned thus: When I make autopsies of fracture in old people, I find only intra-capsular fractures; that is undoubtedly because they are peculiar to old people; and without occupying himself with other differential signs upon the living subject, he thought that age was sufficient to establish the diagnosis.

But facts soon appeared to show that Astley Cooper was mistaken. Bonnet (de Lyon), Rodet, and others after them, found in well-conducted autopsies with vertical section of the neck, extra-capsular fractures with or without penetration, so that to-day it would be difficult to say whether, after 50 years, the intra- or the extra-capsular fractures are most frequent.

A word, now, upon some of the differential signs given by Malgaigne in the table placed at the end of his paragraph upon fractures of the neck of the femur.

¹ Follin & Duplay, *Traité de Pathologie externe*, tome ii.

1st. The intra-capsular, he says, is caused by a fall upon the foot, or the knee, or the buttocks; the extra-capsular, by a direct blow upon the great trochanter. But you will not find out from my poor old women, and you will never find out from other old people who have broken the neck of the femur, whether they have fallen upon the great trochanter, or upon the buttocks. These two regions are too near each other for the patient to be able to say whether it was upon the one or the other that he fell; and suppose that he fell upon his feet or knees—as, after such a fall, there is almost always another backwards and sideways—how are you to know whether the fracture was made before or after the fall upon the side?

I should also like to know how often the diagnosis has been verified upon the cadaver. I doubt if it has ever been done. Malgaigne, in writing these lines, was evidently inspired by a work of M. Rodet,¹ who had published this opinion after experiments made upon plaster femurs. A piece of plaster in the shape of a femur does not at all resemble a cancellous bone whose compact tissue has been thinned, and whose cells have been enlarged by senile rarefaction; for it is due to variations of resistance in different points of its length resulting from these anterior lesions, that the femur, after a blow, yields in one point rather than in another.

2d. In the intra-capsular, adds Malgaigne, there is little swelling, no ecchymosis; in the extra-capsular, much ecchymosis. I complain here that the author did not contrast the swelling in the one with the swelling in the other. Undoubtedly he was embarrassed by the difficulty of being precise. As to the ecchymosis, the word *much* is very elastic. Has our second patient much or little? I could not say, and in any case, it is not impossible that intra-capsular fracture should be accompanied either by great contusion of the soft parts, or by a tearing of the bone which might cause considerable ecchymosis.

You see then that the ecchymosis cannot supply a serious element of the diagnosis.

3d. In the intra-capsular, continues Malgaigne, there is pain near the insertion of the psoas; in the extra-capsular, the pain on pressure is over the great trochanter.

Gentlemen, it is not possible to make pain on pressure a means of diagnosis, for two reasons: first, because if the pressure is slight or moderate it causes no pain, even where there is a fracture not far from it, and because if it is great, it may cause pain itself, and not by transmission of a shock to a neighbouring fracture; secondly, because, supposing the pain on pressure to be due to a fracture, it may be caused by fracture at the base as well as in the middle of the neck.

4th. In the intra-capsular, still according to Malgaigne, the shortening is limited to one and a quarter inches at the most; in the extra-capsular, the shortening is from one-quarter of an inch to two and a quarter inches. Well, we have here four-fifths of an inch, and an inch; consequently we are within limits which allow us to believe in one as well as in the other.

¹ Rodet, Des Moyens propres à distinguer les différentes Espèces de Fracture du Col du Fémur (Thèses de Paris, 1844).

I do not wish to carry this critical examination any further. Malgaigne gives us four more differential signs, all of them as difficult to determine as the preceding ones, and from no one of which can the clinician draw a rigorous conclusion, and do not think that by grouping them all you can reach a conclusion. For, in this group you have a certain number which are as much in favour of one as of the other variety.

Furthermore, that which obliges me to retain and allow you to retain no illusion upon this point, is that pathological anatomy has often shown fractures which were at the same time extra-capsular and intra-capsular; by what signs are they to be distinguished? No one has given them, and yet it is not logical to give the means for recognizing the intra- and extra-capsular, and not give the means for recognizing a mixture of the two.

The truth is that upon this part of the diagnosis we may reach presumptions, but never a certainty. Thus, in our first patient, I may presume the fracture is intra-capsular because there has been no ecchymosis and the pain has been moderate. In the other, I may presume that the fracture is extra-capsular, because there is an ecchymosis, the swelling is considerable, and the pain more severe. But, the reasons which I give in favour of these presumptions might be completely contradicted by an autopsy, or the fracture might prove to be a mixed one.

I said also that this rigorous diagnosis between an extra- and an intra-capsular fracture was useless for the prognosis and treatment, and consequently useless from a practical point of view.

I say that it is useless for the prognosis. Here I find myself in the presence of two contestable opinions which were advanced by Astley Cooper, and upon which he established his distinction between extra- and intra-capsular fractures. The first was that intra-capsular fractures did not consolidate, or consolidated only by a very thin fibrous callus; the second was the conclusion, or rather the intimation (for Astley Cooper did not express himself categorically upon this point), that the patients were condemned to an inevitable infirmity by the fact of this entire or partial failure to consolidate. You see the utility which this question of diagnosis would then have for the prognosis.

This one of our patients, who seems to me to have an intra-capsular fracture, would not get consolidation, would henceforth walk only with the aid of crutches, or at least with a cane and with great difficulty, would be, in a word, condemned to an infirmity, while the other one, who seems rather to have an extra-capsular fracture, would, unless I am mistaken in the diagnosis, have bony consolidation and walk very well. And as for the treatment, you see at once the consequence; if intra-capsular fracture does not consolidate, it is useless to treat the patient by confinement to the bed intended to assure the immobility which is a necessary condition to the formation of a regular bony callus.

Gentlemen, it is very true—and the facts invoked by Astley Cooper and before him, it must be admitted, by other authors, especially by J. L. Petit and Boyer, are demonstrative upon this point—it is very

true, I repeat, that intra-capsular fractures sometimes remain without consolidation, or heal only by means of an intermediate fibrous substance, for the following reasons: 1st. Because the upper fragment is short and no longer receives a sufficient quantity of nutritive material, since it is supplied exclusively by small vessels accompanying the round ligament; 2d. Because the materials of the callus are poured out into and lost in the articular cavity, as is the case in fractures of the patella. It is equally true that extra-capsular fractures, especially when accompanied by penetration, consolidate by means of a bony callus.

But besides these facts, which are common, there are many exceptions which do not allow us to establish absolute rules for the prognosis. Thus, certain intra-capsular fractures form a bony callus; Astley Cooper himself distinctly says so. These are the ones in which a considerable part of the periosteum has remained intact about the fragments, and, on the one hand, supports the vessels which feed the upper fragments, and, on the other hand, opposes the escape of the reparative materials into the synovial cavity. These are also the ones in which, notwithstanding the rupture of the periosteum, bony stalactites form at the edge of the fragments and unite them at some points, although inter-fragmentary consolidation is lacking. Furthermore, the interfragmentary fibrous callus, when it forms, is sometimes strong enough to give the neck of the femur as much solidity as if it had been bony. You see then that if, after an intra-capsular fracture, the bony or fibrous callus can be as solid as that of an extra-capsular fracture, there is no reason, so far as the prognosis is concerned, to maintain that the diagnosis would be of any great value. It would be if, to the knowledge of the precise seat of the fracture, we could add that of the other anatomical and physiological conditions, that is, the amount of periosteum that has been preserved, the aptitude for the formation of stalactiform prominences. Now, as to these points, no author has ever claimed to be able to make a rigorous diagnosis.

Moreover, it must not be believed that all extra-capsular fractures consolidate with a bony callus; in some of them also it remains fibrous.

I have seen two positive examples of this, and regret that I did not preserve the specimens. In both cases it was fracture with penetration, and the injury had been received six months before in one case, and eight months in the other. Taking the head of the femur in one hand and the shaft in the other, an abnormal mobility could be found, and one might have supposed that a bony callus united the fragments. But, to examine the mode of reunion, I made with a saw a vertical section through the bone, a section without which it would be impossible to exactly appreciate the condition of the parts. This section having been made, I first noticed the penetration of the upper fragment into the lower one, the complete disappearance of the bony substance that had been crushed, the diminution of the length of the neck in consequence of this loss of substance, and finally an irregular fibrous line of demarcation between the upper and lower fragments. This line was about one-fifth of an inch thick. Its tissue was quite

dense and adhered firmly to the two fragments, so that the femur thus repaired was perfectly able to sustain the weight of the body. It is none the less true that the callus was fibrous as in many intra-capsular fractures. I proved this by macerating the piece for several weeks, at the end of which the fragments separated.

You see then there is nothing absolute, as to the method of consolidation, in one or the other variety, and we are authorized to-day to say that the rigorous diagnosis between them is not useful for the prognosis.

It might be, however, if the method of consolidation was the only means of explaining the ease or the difficulty of walking after fractures of the neck of the femur. For I could understand that one should say: the old man affected with intra-capsular fracture will probably never walk, because his consolidation will be insufficient, and *vice versâ* for the extra-capsular. But our anatomo-pathological studies have shown us that the difficulty in walking after this fracture, as after all those which are near articulations, depends greatly upon the consecutive arthritis and the diminished power of the muscles. All patients who have fracture of the neck of the femur have traumatic arthritis almost inevitably when the lesion is wholly or in part intra-articular; it is also very common, if not constant, in extra-articular fractures. How is it possible to prevent the articulation which is so near the solution of continuity from taking part in the consecutive phlegmasia? The intensity and the effects of this arthritis vary according to the subjects, and the varieties depend much more upon their idiosyncrasies than upon the seat of the fracture. At the beginning, then, it may be presumed with certainty that the patient will have an arthritis; it may also be presumed, on account of the age (fracture of the neck of the femur being, as you know, an affection of old people), that this arthritis will become an incurable dry arthritis, or if it does not pass to that state, it will leave for many months a painful rigidity of the synovial membrane. I will admit, if you wish, that these results are more probable after intra-capsular than extra-capsular fractures; I wish to establish, only, that they are possible after both, and that from this point of view also, a perfect diagnosis would not have the value which is claimed for it.

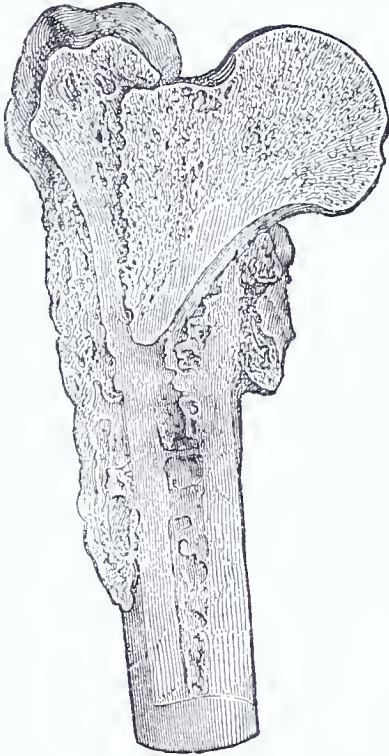
Under the supposition that our second patient has an extra-capsular fracture, I ask myself if this fracture is with or without persistent penetration. For the works of Hervez de Chegoin¹ and Alph. Robert² demonstrated plainly that in fractures of the neck of the femur, and especially in those at the base, or the extra-capsular ones, the upper fragment might penetrate the great trochanter and split it, in which case fracture of the neck is complicated by fracture of the great trochanter. They also showed that, without splitting the great trochanter, the upper fragment might lodge within it, crush its cancellous tissue, and remain implanted there (Fig. 19); an important fact, for it leads

¹ Hervez de Chegoin, *Journal Général de Médecine*, 1820, tome lxxii. p. 3.

² Alph. Robert, *Mémoire sur les Fractures du Col du Fémur accompagnées de pénétration dans le Tissu spongieux du Trochanter* (*Mémoires de l'Académie de Médecine*, 1847, tome xiii. p. 486).

to this conclusion, that there are fractures of the neck of the femur in which attempts at reduction cannot succeed, or if they succeed are followed by a prompt return of the displacement. It is the same here as in fractures with crushing of the lower extremity of the tibia and

Fig. 19.



Extra-capsular fracture of the neck of the left femur with complete penetration of the cancellous tissue of the trochanter.

of the lower extremity of the radius. From the moment when the pressure exerted by one of the fragments has hollowed out the other by crushing it, the resultant gap is necessarily filled by the muscular action which draws the fragments into contact. If they should succeed in re-establishing the natural length and direction of the limb, it would be by removing the fragments from one another and substituting for their contact an empty space which cannot persist, and towards which the pelvi-femoral muscles would very soon draw the lower fragment. Moreover, under such circumstances the interlocking of the fragments is such that our efforts cannot disengage them, and for consolidation their connection is rather advantageous than not.

From this point of view there would be some use in recognizing beforehand the existence of penetration; for the therapeutical corollary would be to make no exaggerated attempt to remedy the shortening and the outward rotation. But here again we

reach only presumptions. When the pain and the ecchymosis make us think that the fracture is extra-capsular, we may at the same time suppose that it is with penetration, because it is especially in such cases that penetration is met with.

The presumption becomes greater, if by making an assistant stand at the end of the bed, grasp the limb, and try to lengthen it and rotate it inwards, we see that the two principal displacements (rotation outwards and shortening) do not yield, and that the attempt causes pain. For in fracture without penetration it would seem as if the assistant's hand ought not to encounter the same resistance as in fracture with penetration. I have again to regret that I cannot give you this mode of exploration as one leading to a positive conclusion. For, if the limb lengthens, and the outward rotation is overcome easily, that will be a proof that penetration, or at least irremediable penetration, does not exist. But inability to correct either of these displacements may be due to two causes; either to penetration, or to muscular resistance. Now, to which of these two causes should we attribute it? This is precisely the question which we have to ask in the case of our second patient.

We have not been able by a gentle effort to correct either of the two displacements. I presume, but I am not certain, that this is due to penetration. The question will be cleared up in a few days. If it is only a muscular spasm it will disappear with the pain, and then if there is no penetration we shall be able to correct at least the rotation outwards, and probably also part of the shortening; if, on the contrary, there is penetration we shall remain unable to correct the displacements.

To recapitulate: you see, gentlemen, that if the etiological, anatomical, and physiological studies relative to fracture of the neck of the femur, which have been made since the beginning of this century, have enlightened us upon the mode of production, the varieties of location, the symptoms, the difficulties, and the method of consolidation, the clinic has not found the means of recognizing, especially at first, all the anatomical dispositions revealed by these studies. The diagnosis upon the living subject is precise only as to the existence of the fracture, and is reduced, on the other points, to presumptions. I prefer to admit this before you rather than to transmit to you errors or useless opinions.

Prognosis.—Those who taught clinically twenty years ago, would undoubtedly have told you that the prognosis was bad for both women, and that death was imminent in a certain measure.

At the beginning of my studies, during my internat under Professors Roux and Blandin, I remember to have seen patients affected with fractures of this kind die after a few weeks, and to have had the opportunity to make the autopsy. But this has no longer been so during the last fifteen or twenty years; the patients survive, and we rarely have occasion to make the autopsical examination of recent fractures of the neck of the femur.

Since I have been practising as hospital surgeon, that is, since 1847, I remember only one case of death during the fortnight following the accident. It was at the Hôpital Cochin, a woman, 82 years old, whose fracture was extra-capsular with penetration.

The three or four other autopsies which I have had occasion to make, were upon subjects who had had their fractures for several months, who no longer suffered at all from them, and who died from some other affection.

To what is this change due? I attribute it to one single cause, that at the beginning of this century the surgeons, guided by false ideas upon the indications of treatment, subjected their old people to the pains of continuous extension. Hence insomnia, fever, loss of appetite, and an alteration of the respiratory passages which carried them off. They said the patients died of hypostatic pneumonia due to horizontal decubitus, and they did not see that this pneumonia was the ultimate lesion of a febrile affection consecutive to a painful condition which old people cannot support. These pneumonias have almost disappeared since we have ceased to make our patients suffer.

Does that mean, however, that our patients are exposed to no alteration of their health dependent upon the fracture? Although I have little fear of a fatal termination, still I ought to tell you here that of

all fractures, that of the neck of the femur is the one which has seemed to me to cause the most fever during the first days. You know that after fracture we have a first period, called inflammatory, during which the predominant symptom is pain. I showed you, however, that, during this period, patients affected with fracture of the leg, or of the shaft of the femur, or of the arm or forearm, did not have any marked quickening of the pulse or elevation of temperature, or that, if this elevation took place, it was temporary. In old people who have fractures of the neck of the femur, on the other hand, we often see during three or four days the pulse rise to ninety, the axillary temperature increase two degrees, and in those who are more than 80 years old eschars form rapidly on the sacrum. I asked myself at the time when we saw these fractures terminate quite frequently by death, if this fever was not the consequence of a septicæmia starting from the crushed spongy tissue, and if it did not deserve the name of septicæmic bone fever, and if the death should not be attributed to a peculiar congestion of the bronchi and of the brain in the course of, and by the fact of, this septicæmia. Since the mortality has sensibly diminished I have given up these explanations, or at least I have recognized that, if it is permitted to invoke a septicæmia, we must admit that it is often slight, and that if we do not torment the old people with the pains of apparatuses, it limits itself to a few days of malaise.

Of our two patients, the one who was injured a week ago is entirely without fever; the one whose fracture was received forty-eight hours ago has a pulse of ninety-two, a little headache, loss of appetite, and thirst. But as there is no oppression, no dryness of the tongue, no delirium, no commencing eschar upon the sacrum, I have the right to hope that the fever will be temporary and mild.

If I have no fear for the life of our patients, I am not so certain about the restoration of the shape and functions of the limb.

As for the shape, I hope that the one in No. 6, the one in whom I suspect intra-capsular fracture, will recover without retaining rotation outwards, because in the few movements which I communicated, it seemed to me that this rotation outwards might be corrected.

The other, on the contrary, the one in whom I suspect an extra-capsular fracture with penetration, will undoubtedly retain the deformity resulting from the persistence of the rotation outwards, that is to say, that when standing or walking, she will have the foot turned outwards. This deformity will cause no great inconvenience, it is true, but it is none the less to be mentioned in the prognosis. We shall, moreover, have to direct some of our treatment towards it, for it is possible that we may ultimately correct it, since I do not consider it absolutely irreducible, although I am by no means sure of being able to make it disappear.

On the other hand, these two patients will preserve a shortening of the limb, for two reasons: first, because I shall not try to oppose it; secondly, because if I should try, I should not succeed, the muscles on the one hand, and the interlocking of the fragments on the other, (especially in the second patient), being obstacles against which we

ately after an operation, it may supervene some hours afterwards, which fact would point to the necessity of constant watching and nursing of the patient until he is considered out of danger. Among the remedial agents for this grave condition of syncope, transfusion has been somewhat extensively employed; but M. Verneuil is not at all partial to it under any circumstances. Indeed, he looks upon it as a most dangerous remedy, as the blood, whether of man or of animals, being of a highly putrescible character, would, even when immediate transfusion is practised, be liable to produce septicæmia, or even pyæmia. He took occasion to say that, whenever transfusion is indicated, as in syncope or excessive hemorrhage, the hypodermic injection of ether or ammonia would be preferable to transfusion of blood or any other liquid, even in puerperal or *post-partum* hemorrhage.—*British Med. Journal*, March 31, 1877.

MEDICAL NEWS.

DOMESTIC INTELLIGENCE.

Administration of Cod-Liver Oil in Malt Extract.—At a recent meeting of the Norfolk District Medical Society, Prof. MARKOE (*Boston Med. and Surg. Journ.*, May 3, 1877) called attention to malt extract as an emulsive agent for cod-liver oils and other oleaginous preparations. At the present time, when cod-liver oil is extensively employed as a therapeutic agent, anything that will neutralize or overcome its disagreeable oily character and bad taste will be welcomed by patients. Extract of malt possesses the power of producing a perfect emulsion with cod-liver oil, and a mixture of equal parts of cod-liver oil and extract of malt was exhibited, having a semi-solid consistence, in which the taste of the cod-liver oil was more perfectly concealed than can be accomplished by any other known process. Other mixtures were also shown containing various proportions of cod-liver oil, and to which various flavoring extracts had been added.

Death during Etherization.—Dr. BENJAMIN W. ROBINSON, of Fayetteville, N C.,

reports (*Virginia Med. Monthly*, April, 1877) the case of Mrs. McNeil, who consulted him on account of a tumour of the breast, which he extirpated while the patient was under the influence of ether. The tumour returned, and the operation was repeated in ten months. Again after the lapse of six months, a third operation was performed, and Squibb's ether was administered in a conical inhaler. During the inhalation the pulse improved in volume and force. In about twenty minutes after the operation was begun, it was announced that, with gradually increasing pallour, the radial and temporal pulse, which had been failing since the operation began, were extinct, and that the respiration was irregular. Brandy was administered subcutaneously, the foot of the operating table raised, and artificial respiration practised. The lapse of a few minutes promised thorough resuscitation, the patient became conscious, the horizontal posture was restored, and the operation was continued without the inhalation of any more ether. In a few minutes the patient vomited, after which it was found that she was sinking. All efforts at resuscitation now proved unavailing. A post-mortem examination appears not to have been made, but the history of the case leads to the suspicion that death was caused by the trachea becoming choked up with vomited matter.

Deaths from Chloroform.—Dr. CHARLES ANDERSON records (*Clinic*, March 31, 1877) over twenty cases of death from chloroform which have occurred in Cincinnati and its vicinity within the last thirty years. Some of these were not previously recorded.

In the *American Journal of Dental Science*, May, 1877, is reported the death of Dr. Chas. A. Jourdan, caused by the inhalation of chloroform prior to the extirpation of his eye.

The American Medical Association.—The meetings of the Association for some years past, even its most ardent supporters must admit, have not produced the results which should follow from the gathering together of so many able and practical members of

the profession. The late International Medical Congress has demonstrated what can be done with the same material, for the most part, under a good plan of organization, with an intelligent arrangement of details, and we trust that the example which it gave will not be lost upon the Association.

We have not seen the programme prepared by the Committee of Arrangements for the ensuing meeting, but trust that it embraces as many as possible of those elements which did much to insure the pre-eminent success of the late Congress at Philadelphia. Judging from the experience of last September, we think every delegate will agree with us in saying that it is very desirable that a detailed programme be published in advance of the meeting, giving the work for each day and hour; that all the Sections meet under the same roof; that a lunch be provided in the building where the meeting is held, so that the members may be kept together the entire day; that a list of delegates registered up to date be published daily; and that the social aspect of the meeting, although an important feature, be kept strictly subsidiary to the scientific work.

At this session of the Association we hope a plan for the future will be devised by which the scientific character of the meetings may be promoted hereafter, and their value enhanced. As tending to the accomplishment of such an aim we would suggest that the general meetings should be solely devoted to the reading of the addresses already provided for, to the reception and action upon the reports from the various Sections communicating the results of their scientific labours, and to such business as may be brought before the Association by the Judicial Council, to which Council all motions relating to private business should be first referred without debate. The meetings of the Sections should be devoted to the consideration of scientific subjects determined upon beforehand, the discussion of which would be opened by reporters, and outlines of whose remarks should be published at least three months in advance of the meeting, so as to promote intelligent debate. The conclusions

of the Sections upon the topics discussed could be ascertained by vote, and reported to the Association in general meeting. Provision ought also to be made for the reading and discussion of volunteer papers.

Such changes as are above indicated would, we think, undoubtedly result greatly to the advantage of the Association.

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The Association and the Pharmacopœia.
—In an able paper read before the Philadelphia College of Pharmacy (*American Journal of Pharmacy*, May, 1877), Mr. Alfred B. Taylor discusses Dr. Squibb's propositions for the seizure by the American Medical Association of the Pharmacopœia of the United States; and he particularly calls attention to that part of the plan for the future revision of the Pharmacopœia, which in Dr. Squibb's opinion is to insure to it a thoroughly national character. "The plan which is to be submitted to the American Medical Association, at its meeting in June next, is that it shall organize a Pharmacopœial Council, to be incorporated if necessary, consisting of five members, which council shall be charged with the *entire management* of the Pharmacopœia and all that pertains to it, and be responsible only to the American Medical Association. This council I would propose to form as follows: The nominating committee of the Association to nominate and the Association to elect the president of the council; then the Association to *invite* the surgeons-generals of the army and navy each to appoint one member, and *invite* the American Pharmaceutical Association to appoint two members." (Dr. Squibb's pamphlet, p. 25.) Now for the *modus operandi*. "As the meetings of this council would have to be frequent during the general revisions, and perhaps two or three times a year for the supplementary fasciculi, and as the members would have to educate themselves to the special work, it would, perhaps, be better that the council should be small and compact, and live in adjacent cities." (*Ibid.* p. 9.) As three of the council are to constitute a *quorum* (*Ibid.* p. 54), who may "obtain a change

in any of its members," we should probably have, as the final outcome of the so-much-vaunted "nationality" of the enterprise, a pharmacopœia under the entire control of *three representatives of the United States* (small and compact), "living in immediately adjacent cities!" And this is gravely proposed as an eminently "national" improvement on the existing *local* plan of an executive committee of *fifteen*, representing *nine* leading cities, from Boston to Richmond, and from New York to San Francisco, together with a representative of the army and of the navy of the United States.

At a recent special meeting of the Philadelphia County Medical Society held to consider Dr. Squibb's proposition, Dr. Albert H. Smith presented the following resolutions, which were unanimously adopted:—

Resolved, That this Society does not recognize the legal or moral right of the American Medical Association to assume the work of issuing a Pharmacopœia as proposed, nor its fitness for the work, if such right existed.

Resolved, That its delegates to the American Medical Association be instructed to use every proper means, by their votes and influence, to prevent the consummation of the plan proposed by Dr. Squibb.

The following resolutions, offered by Dr. Nebinger, were also adopted:—

Resolved, That in the opinion of the Philadelphia County Medical Society, the propositions of Dr. Squibb to modify the *period* of revision of the United States Pharmacopœia and other proposed reforms, are deserving of careful consideration by the medical and pharmaceutical professions.

Resolved, That in the judgment of this Society, such reforms and modifications of ancient plans can be more safely entrusted to the National Convention for the revision of the Pharmacopœia and its committee of revision, than to any new organization.

Resolved, That the action of this Society be officially transmitted to Dr. John C. Riley, President of the Pharmacopœial Convention at Washington, to Dr. Bow-

ditch, President of the American Medical Association at Chicago, and to Dr. Squibb of Brooklyn.

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Medical and Chirurgical Faculty of Maryland.—The 79th annual session of this Association was convened at Baltimore, on April 11th, Dr. Christopher Johnson, president, in the chair. The following officers were elected for the ensuing year: President, A. B. Arnold, M.D. Vice Presidents, Drs. S. C. Chew, Ferdinand Chastard, and Charles H. Jones. Secretary, Dr. W. G. Regester.

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Mississippi State Medical Association.—The tenth annual meeting was held in Grenada, on April 4th, Dr. P. J. McCormick, president, in the chair. The following officers were elected for the ensuing year: President, Dr. B. A. Vaughan, of Columbus. Vice-Presidents, Dr. E. W. Hughes, of Grenada, T. R. Trotter, of Duck Hill, T. P. Lockwood, of Crystal Springs, and J. T. Parker, of Buena Vista. Secretary, Dr. Wirt Johnson, of Jackson. The next meeting will be held at Jackson, on the third Wednesday in January, 1878.

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Texas State Medical Association.—The annual meeting of this Society was held at Galveston on April 3d, Dr. B. H. Harrison, of Columbus, president, in the chair. The following officers were elected for the ensuing year: President, Dr. Kelley, of Galveston; Vice-Presidents, Drs. Cupples, of San Antonio, Swearingen, of Austin, Sayers, of Waco; Treasurer, Dr. Achison, of Denison. The next meeting will be held in San Antonio on the first Tuesday in April, 1878.

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Changes in the Regulations of the Medical Department of the University of Pennsylvania.—At a special meeting of the Board of Trustees of the University held on the 15th of May, it was resolved that hereafter all students shall be required to attend three annual courses of lectures of five months each, each course to be so graded as to prepare the student for the studies of the next. At the close of each annual course, examinations on the studies will be held to test the student's fitness to pass on to the next course. The

above arrangement of studies will enable the third year to be devoted chiefly to the study of practical branches, and it is proposed to teach these "in a more thorough way than has ever been done in America." There will be no preliminary examination for admission. The fees will be \$140 for the first and second years each as heretofore, and \$100 for the third year. The above changes will not affect in the least the status of the present matriculants of the school, who can complete their studies and graduate upon the old plan, unless they elect voluntarily to pursue the new course. The professors will hereafter be paid salaries, so as to be independent of the size of the classes.

This system is substituted for the present two-years course of lectures which, as now delivered, are identically the same each year; and it introduces into medical study the system which is pursued in all other forms of study.

To successfully carry out these efforts to give a better education, which has been demanded by the profession in one form or another for the last thirty years, it is needless to say that a large endowment fund is necessary, and for it the Trustees confidently look to the friends of the University. Already a number of the citizens of Philadelphia have liberally come forward and have guaranteed for several years the University against any pecuniary loss which may result from the temporary diminution in the size of the classes which, it is thought, may for a few years follow upon the adoption of the improved curriculum; and we trust that the profession at large will be equally prompt in giving their sympathy and support to this commendable effort to elevate the standard of medical education in this country.

Harvard University.—Dr. John P. Reynolds has been appointed to the Chair of Obstetrics at the Harvard Medical School, left vacant by the death of Dr. Buckingham.

Changes in the Philadelphia Medical Schools.—Dr. Robert E. Rogers has been elected to the Chair of Medical Chemistry

and Jurisprudence in the Jefferson Medical College. Dr. John Neill has resigned the Chair of Clinical Surgery in the University of Pennsylvania.

Maryland Medical Journal.—The first number of this periodical was published at Baltimore on May 1. It is an octavo of 36 pages, under the editorial and business control of Drs. H. E. T. Manning and T. A. Ashby. It contains four original articles, and editorials and selections. In placing it on our exchange list, we cordially wish it all success.

Homes for the Reformation of Intemperate Women.—Various attempts have been made to establish reformatories for drunken women, but heretofore all have failed to accomplish any encouraging results, and a few years have witnessed their closure. The class of cases received has not been permanently impressed, and the one most likely to be reformed has not been induced to submit their cases for treatment. The "snuff-chewing sisterhood" compose about 80 per cent. of the applicants; and experience teaches that their drunkenness is so interwoven with other vices, that it is next to impossible to reform them. But there is a class of cases in all our large cities that ought to be reached, and that might be benefited, but as yet they have not been; we refer to those in the higher walks of life, who by birth, education, and general deportment, are, when sober, recognized as ladies. They have not been reached, for the following reasons, viz.: 1. Female reformatories cannot be conducted as those for men. Publicity is a great obstacle to the former, but a benefit to the latter. 2. Secrecy rules to a large extent in the drinking of women; and the more public it becomes, the less hope is there for reformation, if received into a home. Shame has a great influence, and treatment must be made as free from the eye of the public as possible. 3. A mixed company is rather an advantage in a home for men, but ruinous to success in one for women, as they will not subject themselves to the risks of subsequent forced association or recognition on the part of

objectionable acquaintances made while under treatment.

To carry out these views, a home has been opened by a society of ladies in a neatly furnished house at No. 220 North 13th Street, Philadelphia, designed exclusively for the class mentioned. The passer-by only sees what is apparently a private dwelling; but within are all the appointments of a small, well-ordered public institution, having its Matron, Board of Managers, etc. Privacy is the order of the house; and the inmates, it is hoped, will be secured through the medical profession, and their friends or relatives. Although in these cases moral restraint is generally required rather than medical treatment, yet the latter, when necessary, will be here administered under the supervision of Dr. Robert P. Harris.

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OBITUARY RECORD.—At Philadelphia, on April 12, JONATHAN M. FOLTZ, M.D., late Surgeon-General U. S. N., aged 67 years.

Dr. Foltz was born in Lancaster County, Pennsylvania, and studied medicine at Jefferson Medical College, in this city, where he graduated in 1830. He was commissioned assistant surgeon in the navy April 4, 1831, and was ordered to the frigate *Potomac*, in which vessel he made a voyage around the world. He served on various American ships of war, and was surgeon on the fleet sent to the Gulf of Mexico during the war with Mexico. During the rebellion, he served on the frigate *Santee*, and was under Admiral Farragut in all his operations on the Mississippi River and at Mobile. He was a member of the Board of Medical Examiners, from 1864 to 1867. In 1870, he was made President of the Naval Medical Board. In 1871, he was appointed Chief of the Bureau of Medicine and Surgery, with the rank of Commodore, and was retired in 1872, after forty-two years of active service.

FOREIGN INTELLIGENCE.

Treatment of Ovarian Hysteria.—The correspondent of the *Lancet* in describing a visit to the Hospice de le Salpêtrière

makes the following report of Prof. Charcot's treatment of hysteria:—

We had the opportunity of seeing Dr. Charcot apply his method of stopping a fit instantaneously in women affected with "ovarian hysteria." Two women fell into a fit, and Dr. Charcot by applying pressure with the hands to the diseased ovary arrested the paroxysm almost immediately.

Dr. Bourneville, who accompanied me on my visit, spoke of the various new substances which he is now trying under the direction of Dr. Charcot in cases of nervous disease, and especially of nitrite of amyl, bromide of camphor, bromide of sodium, and bromide of zinc. He is still very well satisfied with the effects of bromide of camphor since his first researches on the drug. It is administered largely at La Salpêtrière, in the form either of Clin's capsules or of enemata. In a great number of epileptic cases it has been found to diminish the vertigo most notably, and to diminish in a good many cases the number of fits. It has rendered considerable service in the delirium which follows the fits in epileptic mania, and has proved very useful in hysteria. I have been promised Dr. Bourneville's observations on the other drugs I have mentioned. I cannot conclude, however, without remarking that the hydropathic and bathing arrangements of such a large and special establishment as La Salpêtrière seem scanty and insufficient. This part of the hospital arrangements is so very important in the treatment of nervous affections that it is strange that the Assistance Publique does not understand the good, and even the saving, that would result from greater liberality in the supply of baths.—*Lancet*, April 14, 1877.

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Administering Iodine through a Nurse.—Dr. GEMMEL, of Birnbaum, relates (*Berlin. Klin. Woch.*, April 9) the case of a feeble, rickety child a year and eight months old, to whom it was thought of great importance that iodine should be administered, which, however, in any form tried, had induced vomiting and irregular action of the bowels. It was then resolved to try giving it through the milk of a

nurse, and in a few days after she had begun taking it her milk was sufficiently impregnated with it. It was found also that a cow's milk could be similarly affected by giving the animal ten grammes of iodide of potassium per diem for a fortnight. The child under the use of the nurse's milk bore the iodide very well and soon recovered.—*Med. Times and Gaz.*, April 28, 1877.

Death during Anæsthesia.—Anæsthesia was induced in a female, aged 21, who was to undergo amputation of the leg at Westminster Hospital, London. Chloroform to the extent of two drachms was given on lint, and the patient quietly and quickly became insensible; then ether, poured upon a sponge placed in a felt cone, was substituted for the chloroform. Meanwhile, Esmarch's bandage had been applied to the limb above the gangrenous part, and the band secured at the lower part of the thigh. The patient then became blue in the face and pulseless at the wrist; the lips were white, and the heart's action could not be felt. Artificial respiration was immediately begun, and the bandage and band were removed from the limb. In spite, however, of all attempts at resuscitation, which were continued for fifty minutes and which included cold affusion, flipping with towels, and the application of the interrupted current to the præcordium, the heart failed to beat again. The pupils were equally contracted throughout these attempts. The amount of ether used was two ounces, and the patient was moribund in about two minutes after the ether was begun. The chloroform was given by itself for about three or four minutes, and ether by itself for about two or three minutes. At the *post-mortem* examination, the surface of the heart showed friction-patches, but no signs of pericarditis. The wall of the right ventricle was very thin; that of the left side was thicker than usual, pale in colour, but not unusually soft. The mitral valves were much thickened, the chordæ tendineæ thickened, and the musculi papillares hypertrophied. At the junction of the anterior cusp of the mitral valve with the wall of the ventricle

was an irregular ulcerated patch about as large as a silver sixpenny-piece, to which small masses of lymph were adherent. The aortic valves were thickened, but acted efficiently. Two large decolorized clots were found in the left ventricle.—*British Medical Journal*, March 31, 1877.

Daltonism and Navigation.—In the *Lyon Médical* for January 21, Dr. FAVRE, who is well known as an authority on colour-blindness, urges the necessity for a systematic examination of sailors in that respect. After much inquiry, he has found that the subject has been hitherto overlooked, and, with others who are favourably placed for judging, he agrees in the opinion that many of the disastrous collisions at sea, which occur principally at night, are due to a false perception of the colours of the lights used as signals.

Dr. Favre quotes from a recent paper by M. Féris, in proof of the fact that colour-blindness exists among the sailors of the French navy. M. Féris examined 501 sailors at Lorient, and found that 47, or about 9.4 per cent., were wanting in the accurate perception of colour. He also examined 152 men on board the *Hamelin*, and found 18, or 11.83 per cent., affected. These were not all equally faulty, and M. Féris adopted a classification which may be a useful guide to future investigators. 1. Those who hesitated in distinguishing colours, of whom there were 5. 2. Those who confused slight shades of different colours, as pale blue for green, 2 in number. 3. Decidedly colour-blind; (*a*) confusing blue and violet, of whom there were 6; (*b*) confusing both blue and violet, and also red and green, of whom there were 4.

Dr. Favre concludes his paper with some very forcible remarks on the necessity which such results show for a systematic examination of the eyes of those following maritime occupations.—*London Med. Record*, March 15, 1877.

International Medical Congress, Geneva, 1877.—The International Medical Congress will be opened at Geneva, on the

9th of September, under the auspices of the Swiss Federal Council and of the Canton and City of Geneva; and will remain in session the entire week. It will be composed of delegates from medical societies, foreign and local. Members only will have the right to participate in the proceeding of the Congress. The sessions will be held at the University. The registration book will be opened on the 8th of September, from noon until 5 o'clock.

The Congress will meet daily, first in sections, and afterwards in general meeting. The conclusions of the sections on the subjects designated for discussion will be reported to the Congress in general meeting. The general meetings will be devoted to the reception of the reports from sections, and, if desired, to their discussion; and to conferences or to reading of communications upon subjects of general interest.

Delegates desiring to make communications upon subjects not on the programme are requested to notify the committee at least 15 days before the opening of the Congress. The time allotted to each speaker is twenty minutes. The French will be the language of the Congress, but members may speak in any language.

The following preliminary programme for the various sections gives the topics for discussion, with the names of the reporters thereon:—

Section I. *Medicine*.—1. Ulcerations of the Stomach. Prof. Lebert. 2. Parasitic Affections of the Skin. Dr. Hardy. 3. Etiology of Typhoid Fever. Dr. Bouchard. 4. Treatment of Fever by Baths. Dr. De Cévenville. 5. On the Different Tissues found in the Organism. Dr. Zahn. 6. Indications and Therapeutic Value of Tracheotomy in Croup. Dr. Revilliod. 7. Universal Pharmacopœia. Prof. Gille.

Section II. *Surgery*.—1. Bloodless Method of Esmarch. Dr. Esmarch. 2. Influence of Wounds upon Pregnancy. Dr. Verneuil. 3. Treatment of Ozœna. Dr. Rouge. 4. Results of Articular Resections. Dr. Ollier. 5. Galvano-cautery. Dr. Julliard. 6. Means of Trans-

portation for Wounded. 7. Urethral Fistulæ. Dr. Reverdin.

Section III. *Midwifery and Gynæcology*.—1. Placental Souffle. Dr. Rapin. 2. Artificial Feeding of Infants in the First Year. Dr. Zweifel. 3. Anæsthesia during Labour. Dr. Piachaud. 4. On the Law of Growth of Infants in their First Year, and of the Physiological and Pathological Deviations. Dr. Odier. 5. Pseudo-membranous Dysmenorrhœa. Dr. Gautier.

Section IV. *Public Medicine*.—1. Influence of Alcoholism on Mental Diseases. Dr. Magnan. 2. Influence of Adulterations of Alcoholic Liquors upon the Health of those who make and consume them. Dr. Guillaume. 3. Questions in Medical Geography. Dr. Lombard. 4. Influence of Immigration from the Country to the Cities. Dr. Dunant.

Section V. *Biology*.—1. Physical Characters of the Electric Discharge of the Torpedo. Physiological Analogies of this Discharge with Muscular Contractions. Dr. Marey. 2. Cerebral Localization. Dr. Broadbent. 3. Cause of Sleep. Dr. Preyer. 4. The Entozoa of Man. Dr. Vogt. 5. Functions of the Spleen. Dr. Schiff. 6. Histology of the Ovum and rôle of the Zoosperm in Fecundation. Dr. Fol. 7. Physiological Antagonism. Dr. Prevost.

Section VI. *Ophthalmology, etc.*—1. Indications for the Enucleation of the Globe of the Eye in cases of Sympathetic Ophthalmia. Dr. Warlomont. 2. Etiology and Prophylaxis of Myopia. Dr. Haltenhoff. 3. What are the best Methods for determining the State of the Principal Functions of the Visual Organ? (a) acuteness of vision; (b) perception of colours; (c) refraction and accommodation; (d) visual field (indirect vision); (e) mobility of the eyes. Dr. Fol. 4. Tenotomy of the Tensor Tympani. Dr. Colladon.

During the Congress, there will be held an exposition of apparatus or new instruments used in medicine, surgery, physiology, etc.

All communications relative to the Congress should be addressed to the Secretary General, Dr. Prevost, 8 Rue Eynard, Geneva.

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